

THE WINGED PERIL By Robert Moore Williams

AUGUST
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AMAZING STORIES



RETURN OF
MICHAEL FLANNIGAN

By JOHN BLOODSTONE

MEN BEHIND AMAZING STORIES



Robert Moore Williams

HIGH UP on my list of "Things I Do Not Want to Do" is that of writing one of these autobiographical sketches. Editors are always so cheerful about them. They give the impression that composing such a sketch is a pleasant little task that a writer can accomplish before breakfast any morning, still making his daily quota of words before noon. That's not true. Try writing your life-story and your ideas of writing in 300 words, and see how you do.

I have seen too many bad stories (including some of my own) make

anthologies, to have any confidence in the opinion of any one man. Long, long ago I tried to explain to some irate fan that I do something called "slanting". That means, in essence, that each story is tailored to meet the editorial requirements of a particular magazine.

Once in a while I do a story "my" way. In which case it is about a fifty-fifty bet as to whether the story is going to wind up in the waste basket, or make an anthology.

As to the number of stories I have
(continued on page 162)

THE OBSERVATORY

by the Editor

WELL, the figures are in, the readers' mail has finally begun to slack off and the editorial staff is up to its hatband in the second issue—so now we're in a position to tell you how FANTASTIC—the Ziff-Davis "slick" entry in the science-fantasy-suspense field—made out with its first issue.

TO begin with, consumer response (that means people with thirty-five cents) was tremendous—so tremendous, in fact, that the magazine was changed from a quarterly to a bi-monthly ten days after it hit the stands. When you get that kind of acceptance, you do one of two things: lean back and rest on your laurels (and wither along with those laurels!), or you spit on your hands and jump into the job of making the next issue even better. Since we're not much good at laurel-resting, it has to be the second way.

SO, beginning with number two, color is being added to the interior; twenty pages of it! This, we don't mind telling you, costs a great deal of money. But since a great deal of people have indicated they'll buy a magazine that begins where most of the others leave off, we have to put out that kind of product. Color won't do it alone; we know that. "It'll help, though."

WRITERS bought the magazine too—and not just science-fantasy authors. Manuscripts began to come in from names we'd seen before only in top smooth-paper publications. Excellent payment rates and an attractive format always excite the interest of top word merchants. We bought a story from Bob Heinlein, another from Cornell Woolrich, another from Maurice Walsh. These stories weren't bought simply because top-drawer writers wrote them; they were purchased because the stories measured up to the standards we've set.

"THE standards we've set." That's one of those nice rounded phrases you get from editors of every publication from

a crossword-puzzle book to the *The Gnu Breeder's Gazette*. However, it can mean something important—and in our case we think it does!

EDITORS took a look at us, too—evinced an interest ranging from academic to passionate, depending on what they were editors of. Ken White of *Esquire*; Tony Boucher, of *F&SF*; Ellery Queen, of *EQMM*—these and others made a point of saying some nice things which we listened to with becoming modesty.

ONE editor, however, questioned our use of reprints, saying there is "no dearth of active writing talent...and much better material...than reprint stories of a detective nature."

WE'D like to point out to our erudite colleague (slang for "wise-guy in the same racket") that "reprint" is not synonymous with "leprosy." Certainly it is unforgivable to reprint stories that should never have appeared in the first place. But without reprints Shakespeare's work would have disappeared three centuries ago, the Bible would be as rare as the Book of the Dead, and a lot of writers would have to find honest jobs.

AS far as the "detective nature" remark goes, it doesn't go far enough. As long as you're limiting subject matter for fantasy stories, why not also rule out those of a "longshoreman nature"? It seems to us that a good story is a good story, even when it steps on the editor's pet peeve. For the editor who decides what he thinks his readers should read—an editor without elasticity—is the editor who ends up as pall-bearer for his own magazine.

SPEAKING of editors, we've added a new one to the staff. His name is Paul W. Fairman—and besides being one of the top writers in the science-fantasy fields, he has imagination and the kind of mind that says, "Let's try something new!"

—HB

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If Minir'a were not stopped, there would be no way back

THE RETURN OF MICHAEL FLANNIGAN

By John Bloodstone

Flannigan, the man, had been lost on Luna. Now, Flannigan, the robot, came crashing back through the lens to find a body of living flesh in which to build a new life



WHEN IT first made its appearance it was somewhere between Earth's orbit and Mars, traveling outward, away from the sun. Thirty seconds later it had passed the orbit of Mars. In ten minutes it was somewhere near Jupiter. No telescope could have picked it up because its velocity surpassed that of light.

A portless, metallic ball streaking toward the edge of the solar system, emerged out of nothingness.

Earth had no such ships as this. Earth had built a few experimental moon rockets, but nothing more.

There had been only one semi-successful rocket expedition to the Moon. Three men had died, one had survived.

One man out of four. Michael Flannigan, a madman who was dying of radioactive poisoning as a result of exposure to the lunar surface—exposure especially among the craters. There had been one crater in particular. Rheingold, near the ageless shore of the Mare Imbrium. Flannigan had fought to return to Rheingold in the face of inevitable death.

There had been some delirious mention of a Lens—a *Land* of the Lens, and Mnir'sr Nikinra, queen of the Serin Ni. So they had let Flannigan go, in the battered rocket of the ill-fated first expedition. The cost of repairs and refueling had been worth it, because he radioed back further priceless readings concerning the unknown radiations of outer space.

And then he had disappeared. Two weeks had passed and no one had heard from Flannigan. Nor were they planning to send out another rocket until they could solve the problem of radioactive contamination on the Moon and sterility caused by hard radiation in outer space.

The world had wondered about poor, mad Flannigan, but the enigmatic Moon had not deigned to answer the riddle.

THE GOLDEN robot turned to its twin which sat motionless beside it before the viewplate and the control banks.

"You see?" it said. "Yours is not the only world. And the four suns of Gra'ghr are not the only stars. Before you are suns and worlds without end. Gra'ghr was surrounded by some sort of nebula, and now we have emerged from it. An unknown universe lies at our disposal, and all eternity."

"Flan'ri," said the other, "let us

hope it will not be eternity until we find—"

"Don't say it. It may take us twice ten thousand years, and to dwell upon our need without fulfillment within the span of a human lifetime or two could lead to serious frustration—even in robots such as ourselves."

The other's photo-electric eyes, perfectly human in appearance, sought those of the first robot. "But I am afraid," it insisted. "What we seek is what we wanted when we were still human. Our love and the happiness we seek depends on emotions, which we lack. We cling to past desire and future hope only on the basis of our present *memory*. And memory can fade—even in robots. Flan'ri, pray Gur—we can acquire human bodies soon!"

The first robot looked its mate over for one brief moment. Bald, naked, sexless, gold-plated. Yet it must be regarded as a female, as Mnir'sr Nikinra of Serin Gor. As for itself, the first robot remembered that it was a "he". On Gra'ghr, within the Lens, "he" had been Gurund Ritroon, Son of Gur the Avenger, alias Gon'ri the Warrior, alias Flanin'gan Kinri the Silent. Out here on the unknown star-roads of eternity, "he" reverted in his mind to his old identity. His original identity. Michael Flannigan, of Earth.

But Earth he would never see again. Earth was lost forever beyond the mysterious barrier of the Lens. This was a lost universe, inside the Lens. Somewhere in this fathomless abyss he must find a world, or worlds, where perchance a human type of civilization flourished. And there, somehow, they would have to be patient and wait for the right opportunity to find two suitable bodies. He had no murderous intentions. Nor did he hope to use cadavers. In fact, it was impossible even to guess at the unimaginable

circumstance which would satisfy all the necessary conditions.

But with a swift space ship that drew its energy from the stars, with imperishable robot bodies and endless years of time—

Swiftly, he rose to his feet, staring at the viewplate. Simultaneously, he threw the ship into deceleration that would have crushed a human to pulp.

"What is it, Flan'ri?" asked Mnir'ra.

Flannigan did not reply. If a robot could have emotions he had them now. It was as though his articulatory circuits had been shorted out. He could only stare ahead and decelerate.

"Is it that bright object out there?" she asked. "That globe with the rings around it?"

Mnir'ra, never having known the solar system, could not recognize an unmistakable signpost. She was looking at the ringed planet, Saturn....

IF FLANNIGAN had been in possession of his human emotions, he might have sworn aloud or perhaps called out to his Maker. He might have staggered, broken out in a cold sweat. Or his hair might have wanted to stand on end.

But he had neither emotions, hair, nor sweat. He could not emote, but he had his mind—and therefore his memory. Mentally he could be surprised and astounded. And he was all of that now as he looked at Saturn and held the controls at full deceleration.

"Mnir'ra," he said evenly, "something has happened. That wasn't a nebula we went through. Being robots built of tough, imperishable metal, we were unaware of our terrific inertia and velocity. We—our speed *did* something. Maybe when you get to the speed of light, or beyond it—"

"Flan'ri! Will you tell me what this is all about? What's happened?"

He looked at her, put one perfect

hand on her gold-plated shoulder. "Beloved," he said, "*we have passed through the Lens!*"

Mnir'ra's robot form seemed to get even more rigid than it was normally. "You mean—"

"Yes. This is my universe, my own solar system! Mnir'ra, I've brought you back with me!"

Mnir'ra remained silent for a moment. Then she said, "And your own world? Where is that?"

For answer, Flannigan fingered controls on a smaller panel to his left: The viewplate spun, or appeared to. In another moment the scene outside came into focus, revealing at first the distant, glaring ball of the sun behind them. The viewplate shifted slightly, and several other bright bodies came into focus.

There was a bright, blue-green one that appeared to race upward at them as Flannigan applied electronic magnification. Soon Mnir'ra beheld a great globe that glowed in a silvery crescent halo of light. Most of it was in the shadow of night, but the sunlit crescent portion revealed, under the envelope of its atmosphere, the outlines of continents and magnificent seas.

"That is my home," said Flannigan. "This is Earth, the world that bore my original body of flesh and blood. It is teeming with billions of inhabitants. If our search is ever to be rewarded, it will be there."

Earth—Flannigan thought to himself. Earth, and things he had never hoped to see or know again. Things that he had sought to forget forever when he stood for the first time on the high rim of Rheingold, on the Moon—when was it?—a month ago, a lifetime, or eons past? He remembered those things now—white gulls gliding on the tangy air over the small blue bay of Maatlan, colored sails in the sunset off Waikiki, the blinding

whiteness of eternal snow mantling the Andean horizon across Lake Titicaca, the multilaned automobile traffic on the Hollywood Freeway, the misty panorama of San Fernando Valley in the early morning seen from Mulholland Drive, the smell of fresh coffee, the warm breath and the soft lips of a blonde, blue-eyed girl. . . . He stopped his train of reminiscence. There were some things that a robot—

"Your whole life was really there, wasn't it?" said Mnir'ra, sounding remarkably feminine. "There must be many memories. Flann'ri, you never told me before, because to me you were the godly emissary of Gur. You were Gurund Ritroon the Avenger. But here you were a normal human being. Was there a girl, a sweetheart—or a wife?"

There was a girl, yes. His fiancée, Louise Daren. But all his life the ancient thing that was in his blood had responded to the secret call of the Lens. And he had succeeded at last in getting to the Moon and finding the Lens, which had received him and transported him into that hidden world where his destiny, fashioned eons before, could be fulfilled. Then, on his return to Earth, he had been near death, and sterile as well. He and Louise were hopelessly separated even before he made the plunge across the abyss a second time.

And now how was he returning? As a robot. But that did not matter—nor did Louise. If he was returning to Earth in the time that he had known it and Louise still lived, her entire lifespan would be as the single tick of a clock compared to his. He had himself and Mnir'ra to think about. They had a mission, to find each other in life again, to find the happiness that fate had denied them in spite of a love that had leaped the chasm of incalculable ages from one incarnation to another.

"You—love someone else?" asked Mnir'ra. "A girl on your own world?"

"Mnir'ra," he said to her, "as an ordinary Earth mortal I knew and loved a woman, and there are memories, of course. But how can they compare with that other memory—that night under the golden light of Lan Ba'na on the shore of the Barrier Sea below the ancient Temple of Gur when you came to me singing, wearing white flowers in your long, blue hair; our battles for Serin Gor under the four suns of Gra'ghr, the skies filled with flaming death, ships blasting into pieces of wood and men, sails rising in flames from the fire brand and the rocket bombs, and you facing death beside me; my battles shoulder to shoulder with Djikn Kinri, your brother, like the time when we came to rescue you from Xlar'nr Marnari at Wur'tzoon—and my search in the Hills of the Sky for the lost temple of the Secret Gods. I could go on forever. Memories such as those are not mere recollections. They are a part of us, and they transcend all else. They will never die, Mnir'ra."

DURING the reverse trek back toward Earth, Mnir'ra had a nightmare. Which was the more harrowing an experience inasmuch as robots do not sleep or dream.

She had need for neither food nor sleep because she ran on atomic energy built into her frame, which did not have to be replenished but once in a century or two. Her total mental-spiritual socius had been scanned, reduced to an equivalent pattern of electrical charges and transferred as such into the cells of her robot brain. Nightmares had to be the result of subconscious association with animal stimuli, since Mnir'ra now was of metal.

But she did have a nightmare, with her eyes wide open. She had it as she sat beside Flannigan's robot body,

before the control boards—and she was powerless to interrupt the dream, as though for a moment her conscious volition had faded out.

She seemed to be herself, yet someone else at the same time. There was a bewildering awareness of double identity, as though a second personality within her were seeking supremacy over her will.

She was an ancient intelligence. She was a Master, one of those "secret gods" who had built the robots ages ago. She was the ancient brain that had died and turned to dust. Or at least she was possessed by a residual memory of that brain—for once long ago it had transferred itself into the electronic brain to which her identity now clung like a shadowy spirit, fluttering between entity and extinction. Flannigan had borrowed these two robot bodies, but he had forgotten or failed to realize that residual charges of the original occupants might still remain, deep-seated, within the cells of the robot brains. Those residual charges still maintained a pattern of identity beneath the superimposed pattern of her own mentality. And now they seemed to be capable of sapping the energy of her own charges to amplify themselves.

She knew some of the thoughts of that ancient entity that lurked in the sub-cellars of her mind. It was arrogant, derisive, proud, and filled with a lust for revenge, power and conquest. It saw in Earth a ripe plum to be picked, and it recognized Flannigan as its biggest obstacle. It recognized the fact that Flannigan must be destroyed. He must not even be allowed to reach the Earth.

In addition to this, the added nightmare for Mnir'ra was the knowledge that to succumb to this entity hidden within her was to lose her own identity forever. She had already lost her body. Now her mind was being

pushed toward the precipice of extinction.

She made a supreme effort to emerge, and the shadowy presence retreated. "Flan'ri!" she exclaimed at last. "Flan'ri!"

He turned to look at her out of his expressionless metal face. "Yes? What's the matter?"

"Flan'ri, there is danger! I—"

She could not go on. How could she explain in the primitive tongue of Gra'ghr? There were no words. Moreover, when she sought to reveal the truth the inner shadow seemed to rise swiftly in attack, and her mind reeled in the struggle.

"Danger? From what?" he asked. The space ship was so close to Earth now that he was compelled to maneuver it into a decelerating orbit around the planet. "You mean—danger from Earth?"

Quickly Mnir'ra answered, but she heard herself express thoughts that were not her own. "*Yes,*" she lied involuntarily. "*Your world is advanced, is it not? We will be detected and recognized as aliens. Won't they send out interception?*"

Flannigan could not laugh or smile, but he wanted to. "Compared to the science this ship represents, Earth is still in its infancy. They may detect us as we drop deep within the atmosphere, but they are incapable of intercepting a ship like this.

"However, there is something we'll have to figure out. How to announce ourselves. I can radio and procure permission to land under guard."

"No," Mnir'ra heard herself reply. "*You know our real purpose. If they knew we were after two human bodies—*"

"Don't be melodramatic," Flannigan interrupted. "We have years of time. We don't have to rush things. There may be quite legal ways. There is capital punishment on Earth. Many

young people are condemned to death. Perhaps—"

Then Mnir'ra expressed herself, momentarily. "Flan'ri, haste is necessary—" This, followed by unintended words: "*And we must land secretly. We must disguise ourselves somehow as humans and remain incognito.*"

Flannigan stared at Mnir'ra, vaguely troubled. "Why?" he asked.

"*You know we have a greater mission than a return to the flesh.*"

"Now you are contradicting yourself. What's the greater mission?"

Mnir'ra read the alien thought welling up in her: *To conquer—stupid!* But she was aware of a sudden inhibition, of caution. She said nothing. Instead, she got up and made an exit from the control room.

"Women!" said Flannigan. "Now she's hurt about something. You'd think I'd forgotten our anniversary!"

Mentally he laughed as he watched his altimeter. Anniversary. That was a thought. When had they gotten married, if at all? Actually, he figured their mateship as robots had been initiated on the day he transferred her total personality from her cruelly lacerated and dying body to the second robot. He remembered how he had hurried to make the transfer because of her moribund condition. He had required a half hour for his own transference from the hideously scarred body of Gon'ri the Warrior. For her it had been a matter of five minutes.

Come to think of it, maybe it would be a good idea to use the transference machine on her some more and amplify her charges with a feed-back treatment. After all, he could not be sure of the stability of the charges—

An appalling thought struck him. She had begun to mystify him with her curious double talk. Could it be that she was unstable already?

Flannigan rose to his feet and

turned slowly to look at the opened door of the control room. A vague presentiment of danger bothered him. Now where had she gone?

"Mnir'ra!" he called out.

He checked on a faint buzzing sound inside his head. It was a detector. As long as the robots were near each other the buzz continued. By its loudness or faintness he could gauge how far away Mnir'ra was.

What startled him was the fact that the present buzz was fainter than he had ever known it. Either she had gone crazy and stepped through the airlock, or—

Again the presentiment of danger. He started swiftly toward the exit to the control room. There was only one other place: the Inner Sanctum, as he had dubbed it, where he had first discovered his own robot body and the dust heap that had once been the brain of a Master. That room was thick-walled, shielded. Once it had even been shielded from Time.

The transference machine was there. With it lay their only hope of ever being retransferred into human bodies again.

"Mnir'ra!" He activated his built-in degravitor and floated down the corridor faster than he could have run.

A wave, like a shock, engulfed him when he saw that the ponderous door to the transference chamber stood ajar, and that the light was on inside. Another shock followed as he heard a tinkling crash.

Swiftly he pulled the door open and stood in the entrance looking down the inclined floor to the bowl-like bottom twenty feet away. The transference machine lay splintered and torn, with hundreds of silvery wires still flailing about in the air as though it had been a sentient thing that was now in its last death throes.

Mnir'ra stood there looking up at

him, in her metallic fingers shreds and fragments of the delicate, irreplaceable instrument. Their hopes for life in the flesh were now completely blasted.

FLANNIGAN wondered what he would have done as a human being. There were so many outlets for the emotions. But as a robot—

"About that other mission of ours," he heard Mnir'ra say. "It is now the only mission!" She straightened up from the transference machine, her work of destruction accomplished.

"And that is?" Flannigan's brain seemed to him to be encased in ice.

"To conquer your Earth! How could you have overlooked such an obvious opportunity? We are again the Masters—"

"What do you mean, again? Mnir'ra, you're sick. Now you listen to me—"

For answer, Mnir'ra started purposefully for the door in which he stood. As she came to pass through, he blocked her way.

"Let me through!" she said.

"Not until you've listened to me," he answered.

"With whom do you think you are dealing?" she said. "A puny woman of flabby flesh and watery blood? Remember, I am your equal—an atomic-powered engine of destruction. Now, get out of my way!"

Still, Flannigan held his ground. "Why did you destroy the transference machine?" he asked. "That was our only hope of fulfillment. It was built by a science which my world cannot come near to duplicating."

Suddenly, Mnir'ra pushed him. It was a titanic thrust that could have moved a house from its foundations. Flannigan fell backward into the outer corridor. Before he could get up, Mnir'ra had activated her degravitor and was darting toward the control room.

In another moment Flannigan was after her. When he overtook her she was manipulating the controls. To his surprise he noted that she knew what she was doing—yet he had taught her nothing. He, himself, had been a Doctor of Science, but she was from a primitive race to whom he had introduced gunpowder and rocket bombs. What could she know about the controls of a space ship that was advanced millenia beyond the science of his own age?

"Get away from there!" he warned her.

But as she persisted he threw himself upon her, only to get knocked off his feet again. She got up and charged him. He realized that he had been laboring under a handicap, remembering her as Mnir'ra, queen of the Serin Ni. Now he faced her on an even footing. She was a robot like himself. He remembered some of the training of the Irishman he had once been. As Mnir'ra lunged at him, he tripped her. But he feared to damage her seriously—if that were possible.

The ensuing struggle lasted ten minutes. Both robots received rough enough treatment to kill two rhinoceros, but they found themselves to be almost indestructible. Mnir'ra had made one jab with her metallic fingers into some recess under his dorsal plates, and he had heard something break. It worried him, but it did not seem to deter him.

What stopped them was the ship itself. In the course of their banging around the control room they had battered and dented the control banks into dangling wreckage. The ship was falling swiftly into Earth's atmosphere. It was the rising whine of the resisting air that brought them out of their struggle.

"We'll crash!" shouted Flannigan. "The controls are ruined!"

"Then we'll have to jump," said Mnir'ra.

"Jump?"

"Yes. Have you forgotten our degravitors? We can float down."

"But—you've destroyed the transference machine and now the ship! Why, Mnir'ra? You can't be *that* insane! There must be a reason. What is it?"

Mnir'ra looked at the altimeter and saw that it was not functioning. But the viewplate was. They were hurtling laterally across an endless vista of mountains and plains and winding rivers punctuated by villages, towns and cities.

"We'd better jump," she said.

THEY BOTH stood in the open airlock with the wind whipping past so fast that, had they been human, it would have torn the flesh from them. Rugged terrain swept by only five thousand feet below. Flannigan saw low mountains and pine forests. Then clouds surrounded them.

In the clouds the mist was rammed thickly into the airlock and Flannigan failed to notice Mnir'ra's swift movement. She tripped him and he fell headlong into space.

He sought to activate his degravitator, but suddenly he realized that it was dead. He was falling free!

In the same moment he heard a distant cry: "Help! Flan'ri! I can't get free!"

Then he was beneath the clouds and hurtling toward a mountain top that suddenly seemed to reach up to catch him. In his gyrations he caught a glimpse of the distant ship. Its trajectory still held it higher than his. He figured it would crash about five miles further on.

Although the soaring mountain top had shortened his fall, he hit the Earth hard. There was no pain. Neither was there unconsciousness. He

was vividly aware of ricocheting down a mountain slope among trees and rocks, rolling over and over until at last he came to rest in an impossible thicket in a ravine.

Distantly, he heard the roar of an explosion, and he was aware of the ground shaking for a brief moment. The detector buzz in his head had stopped.

He wondered if it meant his detector was broken as a result of his fall, or if Mnir'ra had been destroyed by the crash of the space ship. Then he remembered that distant cry he had heard at the last moment: "Help! Flan'ri! I can't get free!"

In some unaccountable way she had gotten caught in the airlock. Obviously, she had crashed with the ship.

Flannigan did not know if he could move his robot limbs. He hadn't the volition to try. Instead, he lay there on his face in the thicket and had the illusion of crying. It was a trick of his human memory.

Because the old song was haunting him again, the song that had disturbed his earthly life before and taken him to the Land of the Lens:

Whither has my lost love gone?—

Altinra, she of laughter,

She whose eyes were like the dawn

Where night embraces day;

She who sings no more of me,

Who walks into Eternity,

Taking only memory

Of love, like blossoms, withered...

Altinra or Mnir'sr Nikinra—they were the same, the woman he had loved in two different ages of time. But where or when would he ever love her again? Nowhere... Nevermore....

The age-old story was done. Neither he nor she would ever share

again even the memory of that which they had loved. He heard the bards of Serin Gor sing the old lament:

*No more the myriad children
Of Life and Love and Laughter
we shall behold
On Mag'dur's peak or Kild'rn,
On flowered plain of Ra'dur
—they're dead and cold!*

Human-like, he buried his metal head in his arms, tried desperately to shut the ancient songs out of his mind:

*O ancient Queen of Beauty,
Thy love-path in the woodland
was left too soon!
No more your sandaled footsteps
Tread light the hills of Rur'tlid,
where r'ur birds cried.
You sleep where Yun'dlir slept
In caves of dread, where Jin'r hid
and our hearts died!*

WITHOUT realizing what he was doing, he got up and limped through the thicket, tearing up bushes and trees as they blocked his path. He had to get going. Had to be on the move.

Maybe Mnir'ra *wasn't* destroyed in the crash! Maybe she had gotten free at the last moment! He had to find out.

He had lain there in the ravine longer than he realized, and now it was night. He limped. His co-ordination was slow. Things clicked and groaned inside as he walked. But he was struck with a dumb wonderment at the perfection and durability of his metal body to have survived a direct fall of over a thousand feet.

Perhaps Mnir'ra— He cut it off. Why hope? She had been caught in the airlock. She had not jumped. She had gone down with the ship, and its power pile had jarred into critical mass. The explosion had been atomic. She was only vapor by now.

On top of another rise he caught sight of the distant forest fire. He saw a few moving lights in the distance and heard the barking of dogs. Once he detected the neighing of a horse.

Suddenly there was a roar at his elbow and a giant bear loomed over him in the night. He cringed, forgetting he was a robot. It closed in on him but he felt nothing, except that it knocked him over. He caught its giant head between his metal hands and the dumb brute snarled in its frustration.

Why kill it? It was the servant of blind instinct. He gave the bear a shove and it left him on the run.

Flannigan stood up and looked again at the fire where the ship had exploded. Why go on? Mnir'ra had ceased to exist.

And what destiny was left for him to fulfill? A robot, and a battered one at that. The first people he met would no doubt consider him a Frankenstein's monster. Somewhere he'd probably end up with a bazooka shell in his belly. Maybe that was all he needed....

SUDDENLY, Flannigan became aware of two things that took his mind momentarily off his own personal affairs. First, he heard a distant shouting that came from the direction of the fire. It was the type of shouting that a military officer might do in order to transmit verbal commands to his troops. They were sharp orders barked in quick succession. He recognized the language as Russian. Secondly, he heard a low thundering in the distance, and soon he discerned a vast formation of swift bombers soaring upward into the stratosphere. They were obviously starting out on a long-distance flight. Some of the ships he saw silhouetted against the clouds as searchlights fol-

lowed them upward. He recognized the ships and the markings. They were Russian, and they were the latest in global atom bomb transportation.

"Oh no!" he exclaimed, suddenly recalling some recent world history.

He knew that time on Earth and time in the Land of the Lens were different. While he had spent months in the latter place, perhaps only a few weeks had passed here. His reason for believing in that possibility was that while Daren, Deegan and Gilbert, on the first expedition, waited only seventy hours for him, he lived for what seemed to be months as Gurund Ritroon, Son of Gur, beyond the Lens. If that were true, then it might well be that the atomic explosion of his ship somewhere in Russia could have precipitated—

"Pray God I'm wrong!" he cried out. But as he watched the incessantly growing formations of the tremendous armada, he was forced to review his knowledge of current events up to the point of his last flight to the Moon as an Earthman of flesh and blood....

THE YEAR, he reflected was 1960. By that time international diplomacy and the general status of world affairs had progressed from possible to impossible. In fact, that first four-man rocket flight had been equally as important to world politics as it was to science, because for years the Western Power nations had been racing with Russia to be the first to reach Earth's satellite.

While Flannigan had climbed Rheingold in response to the irresistible call of the Lens, his companions were claiming the Moon in the name of the United Nations. Although this gave Russia, as a U. N. member, an interest in the Moon, it lessened the probability of a Russian attempt to grab that which it had been given a chance to help control.

Still, things had been at a high tension, and many an anxious scientific and political eye had ogled the Moon, wondering if Russia would think it worth turning pirate. True, it had been established by Flannigan's first flight that the pilots of any Moon rockets would more than likely pay for the trip with their lives, if they made it at all. If meteors did not get them, the radiation effects of outer space would at least make them sterile. And any work accomplished on the Moon itself—such as would be necessary to build a push-button remote-controlled launching station for atomic rocket bombs—would definitely result in death due to radioactive poisoning.

However, *kamikaze* warfare was a long-established art. It would be relatively easy to propagandize sufficient volunteers to give their lives to any cause. Suicide crews could do it. Upon his first brief return to Earth after his first flight, Flannigan had learned that as a precaution the United Nations had been forced to authorize its member nations, including Russia and her satellites, to begin the construction of atomic space rocket batteries to be trained on the Moon. So that if it were even suspected that a pirate launching station was being erected there in the near or distant future, the entire visible lunar surface could have its face literally "lifted".

But he remembered that the Moon was far from being the only issue. During the "Fifties", the world's political bulls had had a ludicrous holiday clod-hopping about in the booby-trap china closet of international affairs. Korea had finally been left with a dividing line between North and South, largely because of mounting dangers in Europe. As taxes had soared, so had the national blood-pressure in the United States. Econ-

omies had to be made on a drastic scale. One of the effects of this had been the removal of the U.S. Army of Occupation from Japan. The U.S. had lost prestige in Korea because the presence of its forces there had not resulted in a T. K. O. in favor of the U. N., and the lesser nations were out for blood when they saw what could happen to England after Iran, Iraq and Egypt. So the first thing that happened in disoccupied Japan was a revolution resulting in a Communist victory and alliance with New China, while the Russian bear smiled beatifically out over the Pacific.

In the long run, this had cost the U. S. taxpayer more than ever because the States had to back the U. N. to keep the "yellow" reds from inundating India.

Atomic warfare was held in abeyance because now that the U. S. had graciously given the enemy sufficient time to prime his rifle both contenders were ready, and it occurred even to the politicians that it would be silly for two opponents to aim weapons of equal calibre at each other and fire point blank.

Flannigan reflected at this point that where politicians were concerned this method of approach to their own differences would have resulted in something generally beneficial. But where the world was concerned there was no percentage if no nation could be the victor.

So it was that while tensions were at the breaking point and cold-war weary populaces clamored for a hot war to end it all—come what may—nobody dared knock the chips off the shoulders. Rumors and facts gleaned by both Intelligence and plain old dirty spying had brought the Eastern and Western Powers to such a wary state that full-fledged armadas of atom bombers stood ready on a thousand airfields with all crews on red

alert for a single atomic explosion. Once the first enemy bomb arrived, there would be no time for a diplomatic exchange of gauntlets. The bomb itself would be the signal for all-out atomic war.

SUCH WERE Flannigan's reflections as he watched the Russian bombers. What had happened was not hard to deduce. His ship had exploded somewhere near a strategic Russian industrial target. In the minds of the Russians, an unscheduled atomic explosion like that could only mean one thing: that the Western Powers had grown tired of playing around.

Flannigan wished he were made of flesh and blood and glands and nerve cells, so that he could take pleasure in beating himself into a pulp. He had gone wrong from the beginning. First he had ditched his Earth fiancée, Louise Daren, to follow the wild goose to the Moon. He neglected to give himself credit for saving an entire nation of people in the Land of the Lens. Then he and Mnir'ra had lost their bodies of flesh and blood. Further, he had let Mnir'ra, as a robot, go unstable and destroy the transference machine. Mnir'ra was gone—vaporized—and now the explosion of the space ship had precipitated a war on Earth capable of bringing an end to human civilization.

Why? he asked himself. His whole life had not been his own. He had been thrust into the rut of predestination and had had to go where fate decreed. True, he had found Mnir'ra, but without fulfillment. And now she was gone forever from him, while he was left unutterably alone before the spectacle of impending devastation triggered by his own arrival.

Earth—to which he had not hoped to return. Fair Earth with its fresh green fields, its striving peoples and cities and sciences and churches and

homes and schools and corner drug-stores. Earth, now intact; tomorrow a shambles. In three or four hours the bombs would start dropping—Seattle, Portland, San Francisco, Los Angeles, San Diego, and then the Twin Cities, Chicago, Detroit, Pittsburgh, New York. Maybe it would happen sooner if they used trans-oceanic guided missiles. Also, Eastern Siberian armadas could reach Seattle in jig time. Then, too, there were the spies already instituted in the enemy countries. What the bombs did not demolish, they would finish—destruction of bridges and government buildings, and murder.

For lack of anything else to do, he started to walk. Too bad his degravitator was not functioning, he thought. If it were he might be able to get somewhere in a hurry and perhaps convince someone with authority that the explosion was all a mistake.

But that would probably be futile. This unleashing of the great potentials of opposed powers on Earth had been waited for by both sides. The carbuncle of festering hatred and suspicion had felt the first thrust of the knife. Now the operation would have to be carried to its conclusion. World War III was under way and there was nothing he could do to stop it.

But there was another thought that bothered him, something he could not quite bring into mental focus, something that was connected with hidden peril which somehow overshadowed the catastrophe of atomic warfare.

His degravitator. The bothersome idea was connected with that. He worked mentally, groping back. About his degravitator being broken. That was it. He recalled that Mnir'ra had reached under a plate on his back and he had felt something break during their struggle.

Had she deliberately broken his degravitator? But how could she possi-

bly know where it was when he did not know himself? No, it was impossible.

But she had handled the ship so expertly before he interfered. How had she done that? And if she had not deliberately broken his degravitator, why had she deliberately tripped him in the airlock? There would have been no point in tripping him unless she had known that he would fall and be destroyed!

But Mnir'ra was his eternal loved one! She wouldn't do a thing like that and also destroy the transference machine.

Flannigan stopped dead in his tracks. He remembered she had spoken of a "greater mission" than a return to the flesh: *"To conquer your Earth! How could you have overlooked such an obvious opportunity? We are again the Masters—"*

Swiftly in the wake of this recollection came another. Mnir'ra's last words to him as he fell from the ship: "Help! Flan'ri! I can't get free!"

Could it have meant that she was not stuck in the airlock?

WITH A suddenness swifter than comprehension, Flannigan's physical environment was starkly outlined in a blast of blue-white illumination that would have blinded him had he been human. It was a light that rivaled the direct glare of the sun ten times over. As it quickly subsided into a normal daylight glow, he saw a false dawn beyond the burning mountain ahead of him—a false dawn that darkened poisonously into an orange glow.

When he saw the mushrooming cloud above the glow he fell flat, just in time. The shock wave hit his own hillside like a titanic hand, though he was miles away from the center of the explosion. Trees and

bushes either took to the air or were flattened out as though by a steam-roller. Then came sound, a buffeting, ricocheting echo of thunders that constituted a hurricane in itself.

Far beyond, Flannigan counted three other orange points and rising mushrooms. He heard other distant thunders, while white flashes beyond the horizons in many directions looked like an epidemic of summer heat lightning.

The Allies had answered the Russians. The last destruction, predicted by all the prophecies of Man, had begun. Ahead of him, somewhere beyond the mountain, a city had existed. Now it lay gasping, mortally wounded, with a hundred thousand dead. This night would bring death to twice a hundred more populaces, both here and in France, England, America, a world of countries.

Damn it! His space ship had started all this!

And yet, could he really hold himself responsible? This war would have come sooner or later. Still, perhaps there was something he could do. He was still a Doctor of Science. If he could only get back to the States.

But how could a golden robot get by in this topsy-turvy world, especially now? Anyone discovering him would immediately associate him with the enemy. The world was trigger-happy. No one would give him a chance to talk.

His mind went back to Mnir'ra. If she had been possessed somehow, if the ancient Master had asserted himself in her, then perhaps the other robot did not crash with the ship. Perhaps it was here, at large, intent upon disguising itself and contacting humans to put them to work for its own purposes. Here, in Russia, where reserves of weapons, materials and manpower were equal to the desperation

which must have gripped the Soviet Republic by now. If that ancient mind lived, it could offer superior science at a time when it was desperately needed. It could bargain and acquire power. It could conquer the Earth!

Flannigan's first impulse was to start looking for the other robot, but he soon perceived two good reasons for following such a course. First, Mnir'ra's personality must still exist somewhere in the other robot. So it would have to be captured, not destroyed. That would take preparation. Secondly, if he let his own presence be known, the other robot would promptly make him objective number one.

The obvious answer was—time, and a disguise—as well as friends to help him. Speaking of friends, he had Louise Daren, his former fiancée, provided San Fernando Valley had not been obliterated by Russian bombs. He had already told her part of his incredible story. Perhaps she alone would believe the rest of it. In regard to disguises, Louise's cousin, Frank Daren, would provide what was necessary. Frank was an eccentric character, but he was precisely the man he needed now.

Problem: How does a robot, especially in the midst of universal atomic warfare, transport itself from the heart of Russia to Van Nuys, California?

Flannigan simply started walking. Perhaps Mnir'ra was not irretrievably lost. If she was not destroyed in the ship's crash, perhaps there might yet be a way!

Then he thought of Louise, the girl who had loved him all his life, who had waited patiently for him to settle down. Well, that problem was simple. He was only a robot now.

But what was his and Mnir'ra's prime goal? The flesh. If he and she

ever acquired bodies again, there would still be Louise. As an ordinary human being, he had loved Louise. As an ancient entity, reborn into this era out of eons past, he loved Altinra, who in this era was Mnir'ra. And if she survived, he would love her for other eons to come.

Flannigan looked at the poisonously illuminated sky. To hell with it! he thought. First there was the world. Something had to be done about that and the threat of the ancient Master he had inadvertently brought with him out of the Lens, before he would indulge in any personal considerations.

A ROBOT does not require sleep or rest. A robot is not subject to periods of incapacitation due to fatigue. A robot is tireless and efficient. Also, its metallic exo-skeleton can deflect stray bullets in the night, especially when it is made of tough metal of a kind that Earth had never known.

Flannigan very quickly became aware of these advantages in his *Drang nach Westen*. Borrowed clothing, a hat, dark glasses, a muffler and high-collared overcoat, plus gloves, furnished a temporary disguise which enabled him to work quite effectively under cover of darkness. Soon he acquired a gun and ammunition. And somewhere in Eastern Germany there was a ten-year-old captured C-74, freshly fueled for a long haul of personnel to Vladivostok. He managed to conceal himself in the forward baggage compartment. A human being would have smothered, or been crushed by the load of luggage, or frozen to death on the long flight. But he waited patiently until they landed at Vladivostok and refueled for the return trip. The flight crew and returning personnel were grounded by weather.

He took the ship. Pursuit came belatedly, as the advantage of surprise and zero visibility had been with him. He flew very low over rough water. Radar tracking was difficult, and the pursuit planes were not long-range enough to keep up the search. He got away.

Having plenty of fuel and good deciders, he flew north across the Sea of Okhotsk and the Eastern Siberian peninsula, out over the Arctic Ocean north of Point Barrow. He was challenged twice, in code, by Alaskan defense posts, so he kept very low.

Somewhere near the Mackenzie River his fuel ran out. He bellyflopped on a plain of snow. Disguising himself well with cold-weather gear, wearing snowshoes he had found in the equipment on board, and carrying a new rifle and ammunition, he started south along the Mackenzie, wondering how long it would take an atomic war to reach the point of diminishing returns.

SAN FERNANDO Valley had been hit, but not as badly as Los Angeles' industrial section. Burbank and Glendale had received the worst of the single great blast that had wiped out the aircraft factories in that region. Blast and fire had partially demolished North Hollywood and Studio City, but the cities of San Fernando and Sherman Oaks and Van Nuys were reasonably intact. Northridge, Encino and Reseda remained untouched.

However, there was martial law and the whole Western Seaboard had been alerted for an invasion. Ever since both sides of the world had expended their atomic stockpiles and settled down to an old-fashioned war of navies, air forces and armies, Washington, Oregon and California had been filling up with armored divisions and air-defense groups. A hundred war-

ships patrolled the coast and reconnaissance bombers filled the skies from the Golden Gate to Diamond Head. From Honolulu to Guam, and from Guam almost to the Asiatic mainland, allied forces watched. But more than half of the allied forces were engaged in Spain where the last European stand was being made. England was already occupied. And now the seething hordes of Eastern Siberia, Red China, Red Japan and Red Korea glared balefully at Alaska, Canada, and the U.S. West Coast. Every day of waiting tension brought news of at least three sinkings of allied warships by the ubiquitous Red Undersea Fleet. Ordinary nonatomic tactical bombing of cities from Nome to Seattle had already begun, and Western Hemisphere forces were retaliating with Operation Top—hurdlng the North Pole to strike at Murmansk, Leningrad, Moscow and points south.

In Van Nuys, like everywhere else, the Red Cross, hospitalization and First Aid had become words as common in usage as survival corps, radiation casualty, Geiger Patrol, fire, water supply, bomb shelter and "cup-a-cawfee". The majority of the populace was in uniform, one kind or another. Routine had become as rare as bitching about politics and taxes. The U. S. mainland had never been hit before in living memory, and now that it had been hit a surprising number of people had turned politicians into statesmen overnight. The chalk cliffs of Dover were a thing of the past. Now it was Coast Highway 101. That was the new line which "they" must never cross.

LOUISE DAREN, after a seventeen-hour shift at the hospital, had slept six precious hours when her doorbell rang—at four A. M.

She slipped a negligee around her,

put on her slippers and got up to look in a mirror. Hastily, she made a few dabs with a comb and brush at her voluminous blonde hair, rubbed a powder puff over her nose, and went resignedly to the front door.

"Who is it?" she asked, before opening it.

"Special messenger. Open up please. This is an emergency." The voice was peculiarly even and devoid of a tone of urgency.

Louise turned on the porch light and looked through the peephole in her front door. She saw the shadowy figure of a tall, broad-shouldered man in hat and overcoat. The coat collar was up, the hat brim was down, and a black muffler was up to his nose. He wore dark glasses—and gloves. It was warm for overcoats, gloves and mufflers. And one wore dark glasses in the broad light of day. If he were a blind man, on the other hand, would he be a special messenger?

"Put the message in the mailbox," she said suspiciously. "This is a bad time of night—"

The stranger stepped up very close to the peephole. "Louise," he said. "I have come back. Please turn off the porch light—and let me in!"

A wave of gooseflesh crept over her. "Who are you?" she asked.

"This is Michael! Let me in!"

Vertigo caused her to stagger. Michael Flannigan, dying of radioactive poisoning, had left her two weeks ago to return to his mad dream—to the Land of the Lens. She had last seen his battered rocket in a telescope, lost and out of control, close within the grip of lunar gravity. He could not possibly have survived!

And yet. . . She turned off the porch light. "Your voice is different," she said. "This is all so—incredible. Oh Michael, if it's you, prove it!"

"All right!" he said through the

peephole. "There was Tiajuana, October the twenty-ninth. The Twenty-One Club. Do you remember?"

Louise trembled as with ague. "What—" She steadied herself by leaning against the door, to keep from fainting. "What did we—have—for dinner?"

"Filot mignon, medium rare, with mushrooms. You had a dry Martini. They gave us a surprise first course of lobster. The orchestra played Brazil and I gave them five dollars to play an encore."

"Michael!" she exclaimed, opening the door. When he stepped in she threw herself into his arms, sought his lips—

Then she screamed, and he placed a gloved hand over her mouth as he closed the door behind them.

"It is I," he insisted. "Don't be alarmed. There is much to tell."

There was a small end table lamp burning in the living room. In its illumination she could see the golden, metallic glint of his robot's face. She backed away from him, trembling.

That same illumination outlined the soft curves of her body through the flimsy negligee, and Flannigan the robot remembered Flannigan the man. But the eternal element in him remembered Mnir'sr Nikinra, Queen of the Serin Ni.

"I—I'll fix some coffee," Louise stammered. Then her hand went suddenly to her mouth. "I mean—"

They stood there motionless, looking at each other for thirty seconds.

"Oh Michael!" she exclaimed abruptly. He stepped toward her and she was in his arms again. "Michael! Michael! What has happened to you?"

"I'd give half my life," he said in her ear, "if I could drink a cup of coffee—or if I could just bawl...."

BY 8:00 A.M. Flannigan had told his story. He had removed his coat, hat, muffler, glasses, gloves and shirt. She had to believe him. He was the walking and talking proof of everything he claimed.

Regarding Mnir'ra, he concluded, "I should have figured that there could be a residual charge in that robot mind, one that held all the patterns of the ancient master mind that had once been its occupant. The way I see it now, I hurried up her transference, and her charges were not as heavy as mine. The latent intelligence within her was somehow able to borrow energy from her own charges to augment its own patterns. It became dominant, and I can only pray to God that at least a residual pattern of Mnir'ra's mind still remains."

Louise could drink coffee if Flannigan could not. She was on her fourth cup. "Then you really think the other robot exists—that it was not destroyed?"

"It is more than possible. Its degravitator was in working condition. It could have drifted around all night and landed anywhere. Dominated as it is now by the original entity that occupied it ages ago, it is an evil instrument endowed with a superman science and bent on world domination. I can't take the chance of believing it no longer exists. I must find it."

Louise raised her brows quizzically. "And destroy it?"

"I can't do that either. Mnir'ra might still be—"

"I understand." Louise looked away, out the breakfast room window, at her fruit trees in the back yard. Brown and yellow leaves lay on the ground, in the green grass. Withered leaves, gone forever—like her former relationship with Michael Flannigan. "Well, what do you want of me?" she asked, coming to the point.

Flannigan slowly drew the shirt back on over his golden shoulders, while she watched, fascinated by the mechanical perfection of this product of another world. "I need a perfect disguise," he said. "And I thought of your cousin Frank."

She started, almost spilling her coffee. "You mean—prosthetics?"

"Something like that. He has all the materials, rubber plastics and that sort of thing—plus the expert know-how. I'm quite sure he could cover my body and face with the semblance of living flesh, complete with hair and a 'five o'clock shadow'. Where is Frank now?"

"He's working at the hospital—for the government. Rehabilitation courses, prosthetic cases. He doesn't actually do the work anymore. His factory does that."

"But he's still the expert. Don't you think—"

"I'll have him over tonight," she said. "In the meantime you'd better stay hidden. I've got to go to work."

"I'll join the vacuum cleaner in the closet," he said. "I'm just another machine."

She left him hurriedly to hide the tears that she could no longer restrain. He sat there looking at the half empty coffee cup and at the dead leaves lying in the grass underneath the fruit trees. . . .

FRANK DAREN was fortyish, slightly stooped, partially gray, with a precocious middle-age spread and a ridiculous, perfectly round little paunch. His face was large, long, heavy-jowled, his eyebrows blond and fuzzy. He wore a pessimistic scowl on his thick lips, and his small, watery blue eyes were shifty and suspicious behind large, horn-rimmed glasses. His hand-shake was so feeble that Flannigan was not sure he was

holding on to his hand at all when they were introduced that night before supper.

In spite of the irrefutable evidence, Daren continued to maintain a doubtful, brooding expression as the evening wore on. The kind of job Flannigan wanted would cost money, perhaps several thousand dollars, he explained.

There was something about his reticence and shifty, sidelong appraisal that pricked up the Irish in Flannigan. "Louise," he said, when the other two had finished eating, "I am sorry to have to mention this, but—"

"I know," she smiled. "Your will named me as beneficiary. You are perfectly within your rights to bring the subject up. Your property and funds are still intact. I intend to turn them over to you."

"Don't be silly," he answered. "All I want is enough to pay Frank here. You forget that I need neither food, rest nor shelter."

"But Michael!"

Flannigan looked at her intently. "The Michael Flannigan you knew is legally deceased. His body lies dead, riddled by radioactivity, lost forever in a cave on the moon. It's been there for weeks. What you see before you is a mere shell—for the memory of him. I have memories that transcend this age and this world. I am capable of outliving you by ten thousand generations. Life and the material securities requisite to it are fleeting. You need them now, so keep them. I only want two thousand dollars."

Frank Daren had been studying him speculatively. Suddenly he said, "I'll do the job. What's more, since you fell from your ship you must have been shaken up internally. I notice you have a limp. I'd be glad to see what I can do about repairs. Being an expert on artificial limbs, I might catch on to your inner workings. At

least I might be able to straighten out a few bent parts, if any. You'll have to come to the lab at the factory—after closing time. We haven't yet started swingshifts."

Just then the visamatic came to life, a television receiver equipped to be activated by the transmitting station whenever a government announcement was being made. An excited, bald-headed announcer, backed by a map of the Pacific Coast, broke in on their conversation.

"—from Supreme Allied Headquarters late this afternoon. The invasion has begun! This is official, ladies and gentlemen! *The invasion has begun!*"

Louise tensed, looking at Flannigan and Daren. The latter paled, staring in fascination at the visamatic's screen.

"God help us!" she muttered, while Daren shushed her to silence again.

A U. S. Army officer, young but already tense and grave with the strain of his responsibilities, was introduced. "I am authorized to corroborate all civilian announcements made in this area," he said, "to the effect that the Communist invasion of Alaska, Western Canada and the West Coast of the United States has begun. At the same time I am commissioned to assure you that defensive action is also being taken. This is war, but you are being called upon to remember that it is not yet defeat. We have only begun."

He went on to state the enemy's magnitude and positions. The forces involved were those of Eastern Siberia, Red China, Japan, Northern Korea and other Red volunteer groups conscripted from all Eurasia. Southern Korea and Formosa had already surrendered. The Philippines were collapsing, with the help of a powerful Communist underground. Guam, Kwajalein, Wake, Midway and the Hawaiian Islands were out of communication,

as were half the major defense posts in Alaska and Western Canada, which was indicative of new atom bombings. Numerous naval battles were in progress off the coasts of Washington and Oregon. One Red beachhead had been established in the Puget Sound area.

"Listen!" exclaimed Louise. A deep-throated moaning sound began to rattle the window panes. "Air-raid sirens! Quick! There's a bomb shelter on this block!"

Surprisingly, Frank Daren still appeared to be interested in Flannigan. In fact, a sudden anxiety appeared now in his little, watery eyes.

"Come to the factory with me," he said quickly. "It isn't far from here. We may be able to get through the traffic controls with my hospital license. It is very important that you have that disguise!"

"Why?" queried Flannigan abruptly.

Daren raised his eyebrows. "Need you ask that?" he said. "You are an atom-powered superman. We could use somebody like you! Come on! You too, Louise! That Major's uniform is just what we need. My car is outside."

There was an incongruity to this new attitude of Daren's that Flannigan did not like, but he had little time to dwell on it. He was thinking about sunny Serin Gor, in the Land of the Lens. He had helped its beautiful people to ward off a dreaded enemy by giving them the gifts of a superior science. Now the threat of destruction moved toward California through the flaming night sky. What could he offer to this—his own world? Super science? No. But somewhere behind the enemy's lines another robot was no doubt at work. And *that one* possessed what he lacked—the ancient science of a superior technology. Flannigan

nigan's gift to the world could be the other robot's destruction. Yet, even if he could find it and destroy it, what about Mnir'ra?

He left the solution of that in the hands of Fate, as he rode along in Frank Daren's car. He could not see the traffic. He could only hear it—and the air raid sirens. He had insisted on concealing himself in the rear baggage compartment, for obvious reasons....

THAT NIGHT the enemy only got through as far as Ventura, but Santa Barbara received a severe pounding by nonnuclear bombing. The emergency subsided toward midnight and Louise, exhausted from too little sleep, retired to a factory office that was provided with a daybed. She slept while Daren worked on Flannigan.

Flannigan lay on the equivalent of an operating table under a bank of fluorescent lights while Daren, with sleeves rolled up and bifocals adjusted, carefully examined the unclothed robot body.

"This is not only an interesting case," he told Flannigan. "It is a vital one. Tomorrow is Sunday, which is a lucky circumstance. We can work right through."

Flannigan eyed him critically. "At first you didn't seem to be interested, Daren. Now you are actually excited. What's going on? I'm just asking for a rubber plastic disguise."

Daren ducked his head closer in to his work and made a very small file cut. "Maybe part of it is wishful thinking," he said. "But I think the government would be interested in you. Remember the old comic book versions of supermen? You're practically that, in reality. Incidentally, this isn't merely gold plating. It's a clever lamination process. Your 'skin' alone is worth a fortune. Underneath that is a

metal my file won't touch, and it won't take a Rockwell at all. That metal is priceless, from an industrial point of view."

Flannigan began to talk less and watch and listen more. Whatever the man's skill, he did not inspire enthusiasm or trust. When Daren suggested opening him up to take a look at him internally, Flannigan was ready with a little white lie.

"I tried that myself," he said, "on a third robot I found. These things are rigged against tampering. They're booby-trapped—so don't try opening me up."

By Sunday morning Flannigan was coated with a base covering that had been baked on. Louise came in at eight with doughnuts and coffee for herself and Daren. She congratulated Flannigan on his changing appearance. He told them he looked like a man freshly skinned.

There was war news in the *Los Angeles Times*. The Puget Sound beachhead had been wiped out, but Alaska was out of communication, presumably taken. Enemy submarines seemed to be as numerous as sardines. There were too many sinkings of allied warships off the West Coast.

But Flannigan scanned the inside pages for small news items, for any reference to odd happenings anywhere in the world that might give him his first clue as to the whereabouts of the other robot. There was nothing. However, he read a short article mentioning that Stalin was still alive in spite of the recurrent illness that had caused him to relinquish his seat of power at the head of the Communist world three years previously. Owing to an alleged improvement in spectacular longevity treatments, it was rumored that he might yet be able to return to his old post as dictator, and Russian propaganda was supporting the belief

that at the proper time he would personally enter the White House in Washington and triumphantly claim that the dreams of Carl Marx and Lenin had been realized.

Disgustedly, Flannigan turned from the news to the comic section. "I may not be able to enjoy my Sunday morning coffee," he said, "but at least I can read the funnies. Talk about longevity! Superman is never going to die! He's still breaking up nefarious schemes and frustrating mad scientists!"

Louise watched him sympathetically. Then her eyes glistened suddenly as he balled the funnies up and threw them on the floor.

"I can read the funnies, yes!" he said. "But robots can neither laugh nor cry! That's the hell of it!"

"At least they can get mad," said Daren, laying his tools to one side. "After I catch up on a little sleep I'll come back. It'll take me several days yet to finish the job. I'll call several of my staff and instruct them to keep the factory closed until Wednesday. No one will be admitted."

ON THE following Wednesday night, Louise had Frank Daren and several friends over to her house for dinner. Her "new acquaintance" claimed he had eaten before he arrived, so he merely sat and watched the others. He was a hard-muscled, athletic type with a deep tan, deep blue eyes and brown hair. Ordinarily he might have attracted the two other women present, but as they remarked to Louise in the kitchen he seemed somehow too cold and mentally elusive. Besides, he neither ate, drank nor even smoked!

Questions might have become embarrassing and Frank Daren's secret triumph might have been detracted from had not the whole process of

curious scrutiny been interrupted—by war.

Invasion rolled over Los Angeles like a Juggernaut. First came atomic bombs brought in by rockets fired from submarines. Of approximately fifty launched, ten got through. These flattened industrial suburbs and crippled all of Metropolitan Los Angeles. By morning the Asiatic aerial armada arrived, carrying fifty thousand glider-carried troops and accompanying ordnance. They landed on the outskirts of a sick and disorganized city, followed by seaborne armored divisions.

The bomb-shelter in which Flannigan, Louise and Daren and their friends had taken refuge was captured, and the survivors soon found themselves in an improvised Communist prison camp. Flannigan might have escaped, but he chose to conceal his superhuman powers until the right circumstance presented itself. To be discovered and destroyed would be futile, he reasoned. Keeping his secret from the enemy—and especially keeping it from the attention of the other robot, wherever it might be—was an indispensable asset.

FLANNIGAN had experienced stranger adventures than any man on the face of the Earth, yet nothing seemed more incongruous to him than that prison camp. Chinese, Korean and Japanese Communist soldiers, under a single white Russian major, garrisoned a prison compound that extended from Coldwater Canyon in North Hollywood to Sepulveda Boulevard, beyond Sherman Oaks, with the Santa Monica Mountains and Mulholland Drive forming the south boundary and Ventura Boulevard the north boundary. Ralph's Grocery Store was just beyond the compound fence, now converted into a Communist army command post and advanced supply depot.

All the cozy-looking little homes along the winding, flower-lined streets, with their modern interior decorating and electric lights and thermostat-controlled heating systems and television sets and two-car garages—the material inheritance of a clever, industrious nation of freedom-loving people—all those things were changed. Electricity and gas were things of the past. Garbage-disposal units would not work. There was no Wednesday and Saturday garbage or trash pickup. The water service was disrupted. Toilets did not function. Precious but filthy drinking water was rationed, being brought in by tank trucks. Sherman Oaks began to smell. And the lawns and trees grew dry and bare, and every yard became infested with flies and mangy, starving dogs. Radio and TV sets were dead. Meals consisted of beans, potatoes, or impossible foreign battle rations. To the squalor was added pandemonium. Lawns were piled up with abandoned Cadillacs, Buicks, Oldsmobiles, Studebakers, Chevrolets, and Fords. The days and nights were filled with the honkings and crashes and drunken laughter that accompanied this process of human retrogression to the simian stage of evolution.

Flannigan was quartered with twenty male prisoners, including Frank Daren, in what had recently been a nice little two-bedroom home with single bath and patio. Women and children were in a group of houses that occupied three city blocks on the other side of Van Nuys Boulevard. Rumor had it—and several interpreters confirmed this—that the women and children were to be exchanged for Communist prisoners from the American side. Flannigan thanked God for that. At least he would not have to worry too much about Louise. He could concentrate on his own problems—which also entailed some of the problems of

the Democratic world.

But his immediate environment proved to be a heavy distraction. There was too much suffering, too much brutality, to the point of atrocities' being committed in broad daylight. In the course of his imposed labors about the camp, at the point of bloodied bayonets, he came upon many a poor cadaver, quietly being buried by the prisoners. Death was expected in war, but not the kind of death Flannigan and his companions came upon. War did not gouge out eyes or cut out tongues or cut off fingers and toes or behead helpless adolescents. Human depravity was responsible for that.

As the days wore on, Flannigan wondered how much more he could take. He was not like some of his human companions whose emotions could betray them into inviting a bayonet thrust or a bullet when they lost their heads and went screaming with rage at the enemy. But his mind was human, and it revolted at the injustice and depravity of the foe. One day he would have to reach out with his bare hands and literally pull a few bowlegged guards apart. And then he would really be under scrutiny. He prayed for an early opportunity to escape before that happened.

There was a Chinese captain over Flannigan's section of the camp. He was huge, brutal and obnoxious, an ex-wrestler and Judo fighter with a round, fat, sweaty face, hunched, muscular shoulders, a bull neck and a very dirty, crooked-toothed smile. King Moto. He scowled when everything was in order and smiled when orders were violated. For in the latter case he could indulge in his favorite pastime—"discipline". One of his favorite tricks was to face a particularly brawny offender and hand all his weapons to an orderly. Then he would proceed to kill the offending prisoner

with his bare hands.

FRANK DAREN had grown daily weaker and more terrified. He also grew proportionately more cooperative. In fact, some of the men told Flannigan they would lay odds on his turning Commie.

"So help me," said one of them, a U.S. Navy Air Force pilot named Bob Lee, "if he does I'll kill him before he's accepted as a collaborator!"

"Which would effectively put an end to your career," put in Flannigan.

"What career? I used to have one. I was going to test-pilot a moon rocket once. But what the hell am I now? A honey-dipper for these flea-bitten Reds!"

Flannigan liked Bob Lee. He was big, powerful, intelligent—and an independent thinker. But for that very reason he placed himself always on the edge of danger. Perhaps that was why Flannigan always worked close to Lee. When trouble came, Flannigan had decided, that would be the time to crack a few enemy skulls.

ONE AFTERNOON an inspection tour passed slowly down Hazel-tine. It consisted of three battered convertibles, a Cadillac and two Buicks. Standing up in the lead car was Major Balaknin, the only white Russian officer in the whole area. The prisoners were lined up in military formation for the inspection. Some were so weak from malnutrition and overwork that they fell to the ground before Balaknin's car passed them, but the Major did not pay the unfortunates the slightest bit of attention.

King Moto was out in front at attention when the Major's car came to a halt. The latter spoke to the Red Chinese captain in English, as neither one spoke the other's native language. After some official business had been

discussed, Moto turned, with a salute, and called out a name.

"Prisoner Frank Daren—front and center!"

Flannigan placed a restraining hand on Bob Lee's arm. He could see the murderous glint in the other's dark eyes.

"The sonafa—"

"Don't get yourself killed," Flannigan muttered. "Maybe you'll be more useful later. I've got an idea. Hold it, Bob!"

Lee relaxed, but he still cursed Daren under his breath as he watched the latter report humbly to Moto. He was introduced to Balaknin. There was a brief exchange of words, and then Daren saluted the Major and climbed into the second car, together with some sleek, well-fed Chinese officers who greeted him with congratulatory smiles.

They'd be glad to get Daren, Flannigan was thinking. A skilled expert in prosthetics. . .

Then it was that the revolt broke out. It started with boos and verbal threats. Prisoners got out of line and shook their fists. One man even overpowered a Korean guard and took his rifle away. He succeeded in firing a shot that barely missed Daren, and the latter ducked, squealing in terror, into the foxhole formed by the doors and back seat of the car, along with the Chinese.

Machine guns began to chatter. They chattered away at their backs and men both innocent and guilty fell in silent, bloody windrows.

"Do what I do!" said Flannigan to Lee. "Quick!" Whereupon he put his hands in the air and walked toward Moto. "They can't fire this close to the Major's car!"

Bayonets soon stopped their further progress, but since they had their hands up they were not fired upon.

Major Balaknin continued talking to Moto as though nothing at all had occurred.

"Look at that scum!" said Lee. "Wouldn't I like to—"

"Simmer down!" warned Flannigan. "Save it for later!"

Lee looked at him in a bleary-eyed burst of emotion. "What are you made of!" he exclaimed. "By God, I think you're more of a machine than that—Major!"

Flannigan met his gaze steadily. "Maybe I haven't any choice in the matter," he said. But more than this he was thinking of Daren. There was a man who knew the truth about him—and he had turned traitor to his country. Why not to his friends? He could buy himself a high position with what he knew.

"Flannigan," said Lee, "you said you had a plan."

"I have," replied Flannigan. "And the time is getting ripe!"

FLANNIGAN began to formulate a plan of escape. Surprising the night sentries would be a simple matter with his superhuman, atom-powered strength. He and Bob Lee could lose themselves in the Santa Monica Mountains and start out from there. Certainly he knew those hills far better than the enemy.

But another factor soon interrupted his planning.

"Do you know what?" Bob Lee said to him after their evening meal of beans and dirty water. Flannigan always appeared to eat, but did not. He kept up appearances by milling about among the others or going outside on the pretext of having to take care of certain natural functions, and later he would tell Lee he had already eaten. On other occasions he had said he refused to eat, which many of the prisoners did.

"No. What?"

"The women aren't being exchanged. Some of them have been seen in the officers' quarters."

"You mean—"

"Yes!" exclaimed Lee, his eyes blazing. "That's *exactly* what I mean! The dirty—"

"Just a minute!" Another plan came to Flannigan's mind. More bizarre, much more of a risk, but calculated to help the women and make the Commies think twice about molesting them.

"What are we going to do about it?" persisted Lee.

"Maybe we can throw a scare into them," said Flannigan. Perhaps, he thought, under cover of darkness...

"How?" Lee asked him. "I'm willing to try anything!"

"I know you are. We start tonight."

"Doing what?"

Flannigan looked at him for a long moment. "Did you read the funny-papers when you were a kid?"

"What the hell's that got to do with it?"

"We're going to play Superman...."

FORTUNATELY, it was, a moonless night combined with a hazy overcast, and since municipal power was a thing of the past, lighting was negligible. The whole San Fernando Valley was like the palm of a dark, dead hand. The once-familiar glow of street lights and advertising beacons was gone. In fact, the Commies wanted it dark, because their own Intelligence had reported an Allied buildup in readiness for a giant counter-attack, with weapons so new that they had not had a chance to use them against the initial invasion. The mounting tension had even brought a peculiar stillness to the valley. There was no loud carousing. The prisoners in the camp

could hear little except the constant drone of transport planes and trucks as the tremendous supplies, equipment and manpower—resulting from more than a decade of preparation in Asia—kept coming in by sea and by air, relentlessly, hour after hour, as it had been doing day after day and week after week.

"Ants!" Lee whispered. "That's what they are—just ants!"

"Quiet!" said Flannigan.

They were behind shrubbery, traveling slowly through back yards and over fences. By careful maneuvering, they had progressed in this manner beyond Valley Vista Boulevard and were now up against the hills among the more expensive and ultra-modernistic homes. In this section many of the officers had quartered themselves.

"We're in a good position," Flannigan said. "Just beyond these houses are the open hills, canyons, firebreaks—perfect country for a getaway. Of course, up higher they've got the fence and guard posts, but maybe that wouldn't stop us." He felt quite sure he could tear steel fence apart, even though it would ruin this rubber plastic coating.

"I'd feel yellow—leaving the women," whispered Lee. He did not seem to notice that Flannigan could not whisper. The latter's robot voice merely lowered in volume.

"We might be able to do them more good on the outside," said Flannigan, thinking aloud. He was thinking three moves ahead, thinking of all the women and children in existence—of Civilization itself. If he could manage to get to the Allied lines—get weapons and a good, fast ship, penetrate Russia disguised as a human being and find the other robot—maybe the Allies would have a chance. But against the super science of that deadly, ancient master mind that had asserted

itself over Mnir'ra's personality the world could never prevail.

"Hey!" said Lee. "You aren't going chicken, are you? Getting itchy feet before we take care of a few of these rats?"

At that precise moment, a woman screamed. It came from the second house beyond their position. They could see that a dim light illuminated the drawn shades of a back bedroom.

"Come on!" said Lee, and he began to crawl forward. "Now's our chance!"

"Lee, I—"

"Okay! Stay behind if you're yellow. I'll settle this alone!"

"But you don't—"

"Shut up! I'm on my way!"

There was no use trying to explain. Flannigan followed close behind the other, watching and listening for sentries. Most of them should be at the extremities of the camp.

It was a simple matter to get the screen off the window. Since it was a warm night, the window itself was open. Both of them could hear the sounds of a struggle beyond the shade.

Without even warning Flannigan, Lee climbed up and threw himself into the room. Simultaneously, the shade flapped up and Flannigan saw a hunch-shouldered brutish-looking Chinese minus his shirt struggling with a blonde woman.

The woman was Louise Daren, and the man was King Moto. He did not see Flannigan, but his beady eyes lighted with anticipation as he turned and saw Bob Lee. He threw Louise onto the bed and started for the American.

In that moment, Flannigan thought it strange that he should just now remember Bob Lee's full name, from newspapers of several years back—Robert E. Lee, famous society-boy sportsman and athlete. He had been a

Golden Gloves champion. Moto found out something about that when Bob sprang up and landed a right to his chin. Moto went down, but Louise cried out a warning to Bob as the man came up, mouth bleeding, his massive chest squared for a real fight.

"You die for this, Yankee!" hissed Moto.

Flannigan was just climbing in the window when about a dozen hands pulled him back. He whirled, to see eight Red Chinese soldiers grinning at him over bayonets.

In Flannigan's mind a little verse ran, "The time has come, the Walrus said—"

Before any of the Chinese could shoot or try impaling him on a bayonet, he knocked their weapons out of their hands as though they had been holding broomsticks. Then he jumped into them, whirled, flayed his arms about, struck, grabbed, crushed.

Two of them got away. Six lay horribly dead and mangled. He heard the other two screaming. They were not taking any particular direction and they were not trying to raise an alarm. They were just running and screaming.

Flannigan turned to the window and climbed in. Louise sat on the bed against the wall, justifiably terrorized, bruised black and blue, her voluminous blonde hair disheveled and down around her shoulders, with a bed cover drawn up against her. Moto was sitting on Bob Lee, strangling him.

"Michael!" Louise exclaimed, hardly daring to believe her eyes.

But that was all there was time for. Flannigan simply reached out and grabbed Moto. The Chinese may have resisted, but Flannigan could not register such a comparatively puny force. He was not aware even of the other's weight as he jerked him to his feet.

Lee, not badly damaged yet, sprang to his feet. "It's about time you—"

"Bob!" Flannigan interrupted, still holding Moto in an immovable grip. "You finish him!"

The other's eyes lit up comprehendingly, and he grinned wickedly. "Okay!" he said. "This is for you—meat-head!"

The uppercut landed squarely, and Moto went limp.

"Thanks, Flannigan! Now, let's get this girl out of here. I take back what I was thinking about you."

Louise, wrapping the bedcover about her, got up and came over to Flannigan. "Michael!" she sobbed. "Oh, Michael!" He put an arm around her.

Lee's brows went up in surprise. "Friend of yours?"

"Yes," said Flannigan. "I owe you something for the way you interrupted Moto here."

Lee colored slightly. He had been looking into Louise's blue eyes, but now he looked away. "You finished it. Let's go!"

Louise reached out her hand and placed it on Lee's tanned arm. "Thank you very much," she said, smiling through her tears.

Lee's eyes came back to hers.

"Er—Bob," said Flannigan. "This is my...ah...cousin, Louise Daren."

Louise looked up at him quickly, then smiled, understanding his generosity. Uncontrollably, Lee's face brightened with renewed interest. "I like cousins," he grinned, "especially when there're somebody else's. Glad to know you." The sound of an approaching siren was heard by all three of them. "We'd better get out of here," he finished.

They all started out the back door, but that was as far as they got. A full squad of the mixed Chinese terrorists came running around the house into the back yard, surrounding them.

If Flannigan had taken them on, one of his companions might have been shot.

THEIR CAPTORS held them where they were, as though waiting for the arrival of someone in authority. In less than a minute, two familiar figures rounded the corner of the house. One was Major Balaknin, the other Frank Daren.

"There he is!" said Daren, pointing dramatically at Flannigan. "That's the one!"

"Frank!" exclaimed Louise. "You turned traitor!"

Major Balaknin instinctively stroked his mustache when he saw Louise. He stepped nearer and spoke in clear, Oxford English.

"The meaning of the word traitor is purely a matter of semantics, my dear," he said. "I like the unmistakable meaning of the word *wisdom* more. It is that which guides Comrade Daren now. He has become a useful Party member. All others are expendable!" There was a mepacing gleam in his gray eyes as he finished.

"Be careful!" cried Frank Daren, cowering behind the Major. "He's deadly!"

Bob Lee looked at Flannigan, puzzled, wondering for the first time who and what he really was. That struggle with Moto was beginning to come back to him. How had Flannigan managed to handle that two-hundred-and-forty-pound bulk so easily?

"You know, of course," said Balaknin to Flannigan, "that if you make a move your companions will be shot."

"I'm aware of that," said Flannigan. "You have us so far. Now what?"

The Major was looking him over curiously—even somewhat dubiously, because Daren's claims were hard to swallow—when a corporal in charge

of the squad asked Balaknin to look at something on one side of the house, under the bedroom window. Balaknin excused himself and went to look over six mangled bodies and several twisted steel rifle barrels. He came back impressed.

"This is quite incredible," he told Flannigan. "I am not keeping your little secret for your own sake, but for the sake of my reputation—until facts can be established. If you are what Daren says you are—"

"One question," interrupted Flannigan.

"This is the first time you have interrupted me," said Balaknin coldly. "Please keep in mind that it is also the last. Do not speak until you are told! Now—what is the question?"

"Do you Russians have knowledge of another like me in your own country?"

Balaknin's brows arched. Then his eyes narrowed. "What is this?" he asked. "An extraterrestrial invasion?"

"No, but there was another—"

"Flannigan!" exclaimed Bob Lee. "What the devil are you?"

"Silence!" shouted Balaknin.

Just then, Commie air-raid sirens began to fill the Valley with a mournful wailing, and signal flares streaked through a suddenly menacing sky. There were lightning-like flashes, like heat lightning. Lee and Flannigan knew what that meant.

"The Allied counter-attack!" exclaimed Lee. "They're back with more atomics!"

"They are fools!" retorted Balaknin calmly. "They will all be destroyed."

"But they're using new weapons you've never seen before!" retorted Lee. "You'd better start walking backward!"

For answer, Balaknin slapped his face with the back of his hand. "Keep

your mouth shut!" he shouted again. "This night your country will see a new weapon of which you have not even dreamed! You won't have a chance!"

A cry arose from the soldiers. They were pointing at the sky. When Flannigan looked up he felt that he was human again, with a heart—because something actually jumped inside of him. The last time he had beheld such an object had been at Wur'tzoon, in the country of the Djar Li, on Mnir'ra's own world.

It was a spherical space ship, a duplicate of the one that he and Mnir'ra had come here in! Flannigan's robot mind calculated swiftly. It had been four months since his landing in Russia. The other robot must have known how to contact top Soviet authorities immediately. To have achieved that engineering miracle in such a short length of time required top-rank collaboration from the first day. And now he had a simple answer to the puzzle of why Major Balaknin knew nothing about another robot. The *Politburo* had seen fit to advise its underlings of a certain supply of golden eggs—but not a word about the "golden goose"! That was strictly for the top drawer. Now, however, if Balaknin should bring word to his superiors concerning a robot in California, the "golden goose" would hear about it and be on the alert. Clearly, there was only one solution. He had to get to the "golden goose" before it was aware that it still had a mate.

But how?

Balaknin ordered everybody through the house and out onto a modernistic balcony over the double garage. It was a perfect box seat for the show.

"This will be very interesting for you," the Major told them. "You will observe that our new weapon replaces

all other armaments. Your supreme effort is being exerted over there just beyond Pomona, yet not one of our regular aircraft has taken off. Why? Because that space ship up there will take care of everything!"

"Space ship!" exclaimed Lee. "Since when—"

"Since our true leader returned to power," Balaknin replied. "He has not been ill. Instead, he has been working secretly with top Soviet scientists these past three years. What you see before you is the result!"

"You mean Stalin is back in power?" asked Flannigan.

Balaknin grinned in triumph. "He was never out of power. His illness was just a blind."

Flannigan stood firm on his logic. The Soviets could not have created that space ship, which had nothing to do with rockets. It degravitated on the principle of ultrafrequency electromagnetic depolarization of iron. It was definitely a product of the other robot's ancient mentality—proof positive that it existed and was practically Stalin's right hand, perhaps even the power behind the throne.

"God help us!" moaned Lee, watching the space ship as it jockeyed swiftly into position somewhere over Mount Wilson. "If the Russians have overcome gravitation they can rule the world—the whole damned solar system! Think of it! Floating fortresses, any size, any altitude—artificial patrol satellites! They would no longer need a rocket launching station on the Moon!"

Balaknin glanced at Lee speculatively, but said nothing. He chuckled, though, to himself, and Flannigan wondered about that chuckle.

"Look!" cried Louise, pointing at the distant space ship. Luminous patches appeared in its vicinity, in-

dicating that it was drawing Allied fire.

Suddenly, a purplish beam of light shot out from the ship, aimed in the general direction of Pomona. The skyline was limned then in a quick, sharp flash of light, and Flannigan knew that that particular sector of the Allied front was gone—vaporized. He had seen that same ray in action at Wur'tzoon, on the planet Gra'ghr.

That cinched it. The purple ray meant that the other robot still existed. Perhaps... But why hadn't he thought of it sooner? Perhaps the other robot was the pilot of that space ship!

"Come!" said Balaknin. "It's time you three were locked up for the night. Tomorrow you will be shot—all but you, of course." He indicated Flannigan. "You will have the honor of being examined by Soviet scientists."

THEY LOCKED Louise in the jail cell with them.

"I don't think even you will get out of here," Balaknin told Flannigan, tapping the heavy steel bars of the cell. "A tank would have a hard time breaking out, so don't damage yourself by trying."

When he had left them, Bob Lee started asking questions, while Flannigan took interest in the view provided by one of the windows. He could see out over the prison wall, eastward, toward the mountains. The space ship was nowhere to be seen, and he assumed that it had flown northward along other Allied fronts, wiping out all resistance. While he looked out there at the night sky, he heard Lee's endless questions. Just who in the devil was he? What was all this nonsense about superhuman strength, about another one of "his kind" in

Russia, and an extraterrestrial invasion?

"Take it easy, Bob," Louise told him. "I know Michael well. He is not human, but—"

"Not *human*! What do you mean? Are you from another world?"

Flannigan turned to look at him. "I came here in a ship exactly like the one you saw tonight," he told him. "But—"

Lee's eyes widened. "And there are others like you—here on Earth—masquerading as humans?" He was instantly estranged. He backed away, keeping his distance. The two were no longer fellow Americans sharing a common fate. "You are an extraterrestrial! What are you doing here? What do you want?" He tensed suddenly as a new thought struck him. "I get part of it now! That space ship is not a product of Soviet science. It is yours—the product of a completely alien science being turned against us! You are being kept prisoner because your threat to the world includes the Russians, but they have been smart enough to capture and use one of your ships. You are the enemy of *all* of us!"

Flannigan was about to defend himself when he saw the space ship again. "Wait!" he exclaimed. "Look! The space ship is landing! It's coming down right across from Ralph's!"

Louise rushed to the barred window to look out, and Lee looked too, albeit sullenly.

"Meaning what?" he said.

"Meaning," said Flannigan, "that if the one I think is on board actually steps out of that ship, I'll know it." He was thinking of his buzzer detector, which would tell him if Mnir'ra's robot, under the ancient Master's control, was in the vicinity. "And if it is, I may be able to do

something constructive before the night is over."

"I still don't get it," said Bob Lee.

The space ship had landed. It was not more than six hundred feet from them. A portable floodlight illuminated an improvised ramp that had been prepared to reach its circular hatch. The hatch opened and four Russian officers swaggered out. The three prisoners could hear the welcoming shout of triumph that greeted them.

"Wrong hunch," Flannigan muttered. "But maybe it's better this way."

"I still don't follow you," said Lee.

Flannigan turned to him. "Bob, there isn't any time to go into explanations concerning my very peculiar background now, but let me ask you this: how would you like to help me capture that ship?"

"Are you insane, too?"

For answer, Flannigan suddenly straight-armed the window casing and the concrete cracked, one section of it moving three inches outward. That section included the whole barred window, as the internal reinforcing rods bent under the blow.

"That was a gentle tap," Flannigan said. "Do you follow me now?"

Lee blanched, struck by a wave of conflicting emotions—fear, shock, wonder. Louise crowded instinctively behind him, seeking protection even though she knew what Flannigan was, and *who* he was.

"No time for explanations now," said Flannigan. "Just assume I have the abilities of Superman." He was struck by the humorous thought that if his degravitator were working he could complete the Superman role by flying.

Lee shook his head and went over to a bench to sit down. "Let me get my balance," he said. "This is too much! Way too much!"

IN THAT moment, three sentries rushed up to the window outside, jabbering at Flannigan in three different languages.

"Come on!" yelled Flannigan. Whereupon he plunged into the wall and half of it burst outward, crushing one of the guards. Flannigan literally threw the other two sentries away like limp rags. He took up a rifle and tossed it in to Lee, simultaneously acquiring one for himself.

"On the double!" he yelled. "Bring Louise!"

The following six minutes were engraved in the memory of all three of them forever. Incredible, blurred moments of swift, herculean movement occurring with a dream-instantaneity and yet comprising a violent concatenation of events which seemed to last a separate lifetime. The two humans remembered Flannigan in the guard tower, mangled bodies hurtling darkly through the air, the howl of alarm sirens, the glare of lights, the chatter of machine rifles—which was soon silenced by Flannigan's counter-fire. Louise and Bob distinctly saw and heard his body deflecting steel-jacketed bullets.

Then there was Flannigan running with a heavy-calibre machine gun in his superhuman arms—the armored prison car, with Lee driving and Flannigan on top, exposed, firing at everything in his path.

"Right through the fence!" he had yelled. "Full speed—to the ship!"

Forty miles per hour down Stansbury Avenue, mowing down armed M.P.s. Fifty, sixty, seventy—and then the fence. It parted stubbornly before the ponderous, speeding car, and if Flannigan had been human he would have died, because a piece of it struck him.

But all of them went on, crashing

"Into the ship!" yelled Flannigan. door of the space ship.

"Into the ship!" yelled Flannigan. "I'll cover you!"

The greatest weapon of all was surprise. The Commies were completely unprepared for such a miracle as this. And Flannigan's unrelenting fire was a factor in comprehensible reality which also had its effect. When Louise and Bob ran through the entrance over the dead bodies of two guards which Lee had shot with his own gun, Louise passed through safely but Lee caught a stray bullet in his back and fell.

A whole company of troops closed in between the armored car and the ship, and Louise came back, exposing herself to their guns. "Michael!" she cried out, hardly knowing what she was doing.

"*Banzai!*" yelled Flannigan, with superhuman volume in his voice. The troops were distracted, turning to fire on him as he leaped from the top of the car into their midst.

Human flesh and the comparatively soft substance of bullets and bayonets could not stop his advance up the ramp. Easily, he killed and maimed, running through them like a hot knife.

"Get under cover!" he yelled to Louise, while the Commies scattered in terror. He ran through the door, carrying Bob Lee with him and activating the familiar closing mechanism at the same time, as he instantly recognized the ship as a duplicate of the one he had piloted. Just as the lock closed he heard the swift, crescendoing roar of attacking aircraft.

"I'm taking off!" he shouted. "Brace yourself for bomb concussions!"

Louise fell to the floor as the ship shook under the blow of bombs. But in another moment it was the pressure of acceleration that held her to the floor. The space ship was aloft, and

Flannigan was forcing himself to calculate how many gravities a human being could take in order to preserve the lives of his two companions.

When his altimeter registered a good fifty miles, he locked the ship in neutral and it drifted gently along with the Earth's atmosphere, neither gaining nor losing altitude. Then he turned his attention to Louise and Bob.

He found Louise tearing her petticoat apart in an effort to make bandages for Lee. The latter was conscious, but in great pain. A nasty wound appeared in his left shoulder, but the bullet had apparently passed through him, emerging just under the collarbone.

"Sorry, Bob," Flannigan said. "We're all lucky at that, though, considering. I'll see if there's a first-aid kit around. Looks like your trouble is merely bleeding and danger from infection. We'll try to stop both."

Louise detained him. "Michael," she said, "this is all beyond me too—this ship and—well, everything. What are you going to do?"

Lee's eyes glared a challenge. "If you're on our side, you know how you can prove it, don't you?"

Flannigan looked down at him where Louise held him in her arms. "I'm listening," he said.

Lee sat up, with considerable effort and pain. "You can run this Buck Rogers battle wagon over the whole Pacific Coast and wipe out every last stinking Communist beachhead you can find! I saw what that blue ray did to the Allied counterattack. You can do the same and worse to the Commies!"

Just then, Flannigan detected a motion of the ship which meant nothing to the other two but which in his experience signified that something was wrong—very wrong.



The greatest weapon of all was surprise

"I'll be back," he answered.

Lee tried to get up to follow him, then winced, dropping his head back against Louise's cushioning breasts. "What's all this Michael business of yours?" he accused her. "Can't you see he's an alien? He won't do it!"

Louise wanted to argue with him, but just then he fainted. She got up to look for the first-aid kit herself.

Alone in the control room, Flannigan examined his instruments. The ship was no longer in neutral. It was definitely under way, gradually increasing its velocity. He manipulated the controls but found them dead. Nearby was an operator's panel controlling the purple ray. He tried that and found that it, too, was dead.

In that moment a voice emerged from the speaker of his televiewer, though the screen remained blank, and the words he heard definitely identified the speaker as the one entity Flannigan sought. He was being addressed in Mnir'ra's tongue, the language of the planet Gra'ghr!

"So you were not destroyed after all! I assumed that if you existed, which was probable inasmuch as I could not locate your remains, you would be foolish enough to try to capture this ship, so I took the precaution of setting a trap. You are under remote control, Flannigan Kinri. This ship is no avenging weapon for you. Instead, like the black-winged Ich'nu of Bidjar Tan, it is homing across the Barrier Sea—to me!"

Flannigan answered back, but to no avail. The speaker went as dead as his controls and the ship hurtled swiftly across the Pacific toward Russia.

SEVERAL hours passed uneventfully, during which time the space ship moved unerringly toward its destination. In the meantime, Flannigan helped Louise to treat Bob Lee, who

had regained consciousness. By the time the ship began to descend, he had been given adequate first-aid treatment and was feeling comfortable, though weak. The other two had also told him most of the real story concerning Flannigan's background.

"So you're *that* Michael Flannigan," Lee said finally. "Funny I never made a connection between you and 'Moon Rocket' Flannigan. I guess it was because the official conclusions in regard to your death were so definite and universally accepted. Good God, man, what adventures you've been through!"

"It looks like we still have some more in store for us," said Flannigan. "We are about to land in Moscow. We are about to discover whether Stalin still rules or if my erstwhile robot mate now controls the destiny of the world."

"Perhaps both," replied Lee. "But if that other robot could be destroyed—"

"You forget," said Louise, "that the other robot is also Mnir'sr Nikinra."

Lee looked steadily at both of them. "I'm sorry," he replied, "but I have not forgotten that. What you both seem to forget is that the world is at stake!"

It was Flannigan's turn to stare at Lee. The sudden silence was peculiarly eloquent—but it was suddenly interrupted by the loudspeaker in the control room, which could be heard throughout the ship. A distinctly human voice with a Russian accent addressed them.

"Prisoners! You will prepare to disembark under guard! He who is named Michael Flannigan is warned that if he offers resistance his companions will be shot instantly!"

A slight jar was felt as the ship came to rest. Immediately, they heard the airlock open. Louise looked at

Bob Lee helplessly. He grinned back at her.

"There's no hemlock around here to drink," he said. "Might as well try vodka. Come on!"

The three of them went to meet their captors.

MOSCOW sprawled dark, dismal and wet under a solid blanket of rain clouds. In view of still recurrent Allied bombings, much of the city lay in ruins. Disaster crews worked constantly to clear the streets and search the wreckage for bodies. All the military regulations of a great metropolis caught in the throes of war were in effect, including a perpetual blackout.

The car bearing Flannigan, Louise and Lee to their destination twice skirted large blocked-off areas several miles in extent, which had been devastated by atomic bombs and were still unsafe owing to radiation contamination. The prisoners reflected that although the first few days of the war witnessed an international expenditure of atomic stockpiles, production efforts on both sides had supplied enough additional atomic bombs to make possible sporadic forays with the deadly weapons, and the Allies were still striking hard blows in spite of their predicament. They saw weirdly garbed Geiger Patrols gingerly probing the outskirts of these flattened areas.

At another place they skirted a brand-new industrial area several miles long. Here there were violations of the blackout, because great flashes of light illuminated the drizzle above the buildings as though giant foundries and smelting plants were in operation. There was one breathtaking moment when a particularly sustained flash of light illuminated ten giant, spherical

shells, which were instantly recognized by all.

"Space ships!" said Flannigan. "They are building a *fleet* of them!"

"It's later than you think," muttered Lee, cryptically. "That other robot doesn't waste much time. If that fleet ever goes into action, everybody might as well start liking caviar. The Communist Invasion may have made old Lenin turn over in his grave for joy, but this is going to make a whirling dervish out of him!"

They arrived at and were admitted through the formidable walls of the Kremlin, a fact which demonstrated the importance which the Soviet Government had attached to the discovery and capture of Flannigan.

"This way," said the English-speaking captain of the guards who surrounded them. "You first," he said to Flannigan. "Please observe that your friends are in danger of being shot if you do not follow orders to the letter."

Two squares were formed by the guards. The first square surrounded Flannigan. The second square surrounded Louise and Bob Lee, who had to accept the girl's arm for support because of his weakness. In that second square two special guards walked behind the two human captives, holding automatics in their backs. These two guards were watching no one but Flannigan. His actions would instantly govern theirs.

After being escorted through various corridors lined with more military police, they were brought to a halt before a particularly ominous-looking door. It was big and very plain-looking.

"The human prisoners will remain here," said the captain of the guard to Louise and Bob Lee. "You," he said to Flannigan, "will enter here. Before you do so, however, please be advised that an anti-tank gun will be trained

on you at all times during the interview. If you make any unauthorized move, you will be destroyed and your friends here will be promptly shot. Do you understand?"

Flannigan looked slowly about him. He gazed for one long moment into Louise's eyes, then looked at Bob Lee, who watched him steadily.

"I do," he replied at last.

The captain of the guard knocked on the big, plain door. It swung inward silently, and Flannigan saw nothing but an old-fashioned folding screen set up to block the view of those standing outside. Above it he could see a long ceiling, glaring with suspended floodlights.

At a signal from the captain, he entered the place.

UNUSUAL preparations had evidently been made for this meeting. What had been a modest conference room had been quite radically altered. To Flannigan's left a ten-foot square of wall had been uncovered. Through the opening thus made, he saw a long room filled with sandbags. To his right, a similar portion of the wall had been removed, revealing another room. In this room an anti-tank gun had been mounted, trained on the sandbags on the other side. A tense, pale-faced artillery crew waited in firing position beside the gun. They looked at him wonderingly as he walked in, evidently well briefed on what had occurred in Sherman Oaks.

In the direct firing line of the gun and in the center of the room was a slightly raised platform surrounded by steel railings. To these were attached heavy iron shackles, inches thick. The captain of the gun crew indicated by a gesture that he was to take the stand. When he did so, guards fastened the shackles to him. He could

have torn loose from them possibly, but it might take a few seconds to do it. That would have been all the time needed by the gun crew to fire. Once he was firmly installed on the stand, he turned his attention fully upon his interrogator.

The latter sat behind a plain mahogany desk at the end of the room. It was the Dictator himself, easily recognizable from all the pictures Flannigan had seen of him, but evidencing strongly his continuous fantastic struggle against the encroachments of senility. Stalin's sagging, wrinkled physiognomy was ashen gray, as were his hair and brows and mustache, but his eyes alone revealed the stubborn life within him and the titanic power of a will that defied not only the world, but Death itself.

"So there are two of your kind," he said in a tired voice. "The first I consider to be a valuable ally, but you are not. Still, it would be extravagant to destroy you in view of your unusual abilities. If these can be employed to our advantage, your continued existence will be justified.

"I do not propose to argue with you. You will do as you are told or accept the consequences. We are completing the construction of a fleet of space ships identical to the one you tried to capture. This fleet will be used to maintain discipline throughout the world. Whether or not it may eventually be utilized to conquer and colonize other planets of this or other solar systems, will depend upon the degree of shielding from space radiations which can be obtained, in order to make space travel possible for humans. Be that as it may, an additional safety factor against possible future insurrections in any part of the world must be established. In case we are surprised, for example, by any unwanted outbursts of American ingenu-

ity whereby our space fleet could be rendered ineffective, we must be ready with an infallible reserve weapon.

"Such a weapon has been partially completed already, but it has cost the lives of too many valuable technicians. You, however, are a highly efficient and capable automaton equipped, I understand, with a specific human intelligence and formal scientific training. I am aware that you were once that Michael Flannigan who completed two rocket flights to the Moon."

So Frank Daren's information had reached this far already, reflected Flannigan bitterly.

"The weapon to which I refer," continued Stalin, "is on the Moon now. We could perhaps dispense with it and set up artificial satellites which would accomplish the same purpose, but the latter would require time and additional expenditures and too much of an investment has already gone into the lunar weapon to justify its abandonment at this stage. Volunteer rocket crewmen secretly installed it, but in every case each volunteer has died as the result of poisoning from radiations occurring both in space and on the Moon itself. However, a robot such as yourself could work there unaffected by such radiations. You probably would not even require a space suit, and could work without food or sleep.

"The weapon under discussion consists of a multiple rocket-launching station, remote-controlled, from here. The rockets, charged with hydrogen-bomb warheads, can be directed to any desired spot on Earth. They could be used in cases of vital emergency. What remains to be accomplished is the completion of certain electronic circuits there and preparation of the launching cradles for the reception of the first rocket bombs. You yourself

can load the cradles once they are ready. We will keep you exiled on the Moon permanently for that purpose. Any tampering with the station will result in the wholesale execution of ten thousand American citizens. Our instruments here would enable us to detect instantly the result of any duplicity on your part."

Flannigan could not hold back any longer. "What makes you think I'd work for you in the first place?" he asked.

"That is quite simply answered," replied Stalin. "You have just come from the Sherman Oaks prison camp. You know that camp and many of the prisoners there. Tomorrow, one of those prisoners will be shot. On the following day, two more will be shot, and so on, increasing the number of victims by one on each succeeding day, without limit, until you have accomplished your initial purpose and installed our first bombs, which will be transported to you by remote control in one of our space ships. Incidentally, any attempt to capture a supply ship would result in an atomic explosion which would destroy you, so you can eliminate that possibility from your mind."

For a moment, Flannigan contemplated tearing loose from his bonds and ripping Stalin apart, but he remembered his friends outside. Even if he could duck the anti-tank gun, they would be shot as the result of such an action on his part.

"How soon can I get started?" he asked. Perhaps, he thought, there would still be a way to outsmart the Russians once he got hold of that launching station on the Moon.

Stalin got slowly to his feet and gazed upon Flannigan balefully like an aged lion. "This is your project," he answered. "I will place technicians at your disposal. You will be famili-

arized with the plans of the lunar station. As soon as you are ready, a ship will transport you to the Moon."

"But it might take days to get ready! You can't start the executions so soon!"

"This interview is closed," said Stalin heavily. He signalled the guards to unshackle Flannigan and conduct him away.

"But where is the other robot? Mnir'ra—I—that is, if I could talk to it—"

The guards who had unshackled him motioned for him to leave the room. One of them carried a heavy-calibre bazooka. Flannigan surrendered himself to them.

DURING the five days that preceded Flannigan's departure for the Moon, he did not see either one of his recent companions, except on the last afternoon. War prisoners were detailed to load the ship with technical equipment. Among these latter were women as well as men. In the last minute, before entering the ship for the takeoff, Flannigan bumped into Louise and almost knocked her over. She was carrying an armful of cartons containing special crystals and condensers. The ramp leading up to the airlock was lined on either side with armed guards who would not allow the prisoners to slacken their pace, but in this instance Flannigan risked disturbing the routine by talking to Louise. She, however, was the first to speak.

"So you are actually going through with it!" she said accusingly.

Flannigan saw the guards on either side of him tense for action. He remembered that in Sherman Oaks fifteen prisoners had already been executed, that six more would die on the following day. He had to keep going without delay, get to the Moon, figure

out a solution. Louise evidently did not know about the method of coercion Stalin was using. There was no time to explain.

"What else?" he said lamely. But his robot's voice was incapable of expressing all the little nuances necessary to convey his real sentiments. To Louise he sounded coldly indifferent.

"Am I speaking to Michael Flannigan," she asked him, "or to a second alien entity that has dominated him as Mnir'ra was dominated?"

Flannigan was moved to protest against this idea, but the guards prodded Louise up the ramp.

"Bob Lee says Flannigan is gone," she called back to him. "We know what you are now!"

Mentally, Flannigan shrugged helplessly. Another interlude had ended.

That night, five hours after the space ship had taken off, a rare Allied Commando raid occurred in the Moscow area. Ten thousand picked men were involved in the aerial blitz. At an appalling cost, they had come, like *kamakazes*, to capture a space ship, only to discover that the only workable model had left the Earth.

However, the raid was not entirely unsuccessful. Among the few hundred wounded and battle-weary survivors who returned over the North Pole to the Allied lines east of the Mississippi, were a few rescued prisoners of war—including Louise Daren and Robert E. Lee. The latter two proved to be valuable, as was soon ascertained at Allied Intelligence Headquarters.

FLANNIGAN was unaware of the location of the Russian station on the Moon. He had wondered how they had managed to bring such a project close to completion when the entire visible lunar surface had been under close telescopic scrutiny by every na-

tion capable of affording an instrument powerful enough to do them any good. As the ship, under remote control, neared its goal, he soon discovered the simple answer. The station was on the *other side* of the Moon, just over the horizon! With remotely controlled rockets equipped with navigating vanes in their exhausts, the Earth could be hit regardless of which side of the Moon they were launched from. Still, there was quite a technical problem remaining. How could the remote operators of the system activate a station blocked out of radar view from the Earth? The answer to that problem was soon made apparent also.

As the ship drifted slowly across the lunar landscape on the fringe area of Earth visibility, he saw something glistening in the sun's naked rays—something that was nestled on the ridge of a lofty crater facing Earth. In the ship's televiewer he made out a hermetically sealed dome inside of which was a radar transmitter and receiver, connected by transmission and power cables across the fringe to the unseen side. This tiny station could not be detected readily by telescopes, yet it could transmit and receive radar signals to and from the Earth and control a deadly launching station erected on the opposite side of the Moon.

In spite of his predicament, the scientist and adventurer in Flannigan could not be suppressed at this moment. His previous trips to the Moon had brought him only to the known side of the satellite. Now he was looking for the first time at the other side.

It possessed no lost valleys containing air pockets and Moon people. It raised neither living nor dead cities to his view. It was as naked and barren as the known side—yet it *was* different. There was the expected dis-

play of craters, barren mountain ranges and gray seas of cosmic dust, but there was a peculiar "uphill" effect when he looked at the far horizon. Abruptly he realized that the astronomical hypotheses concerning this side of the Moon had been aimed at the truth. Earth's satellite had a teardrop shape, the bulk of its mass being toward the foci of its orbit. The unknown side was a gigantic raised peak, which explained why the Moon did not have a normal diurnal rotation.

Flannigan reflected that if the Moon possessed an atmosphere, a person could walk up beyond its limit by merely going to the central area of its opposite side. It was at least a hundred miles out of line with the mean surface curvature and topped with spectacular, towering, twisted mountains. He saw one distant, titanic mass of volcanic rock that actually twisted upward like the end of a corkscrew. An explorer, standing on its peak, might grow dizzy looking downward at a sloping, twisted, surrealistic world twenty miles beneath him. Here in this hidden devastation and eternal emptiness, Mt. Everest was put to shame. He was reminded of the old metaphysical question: could sound occur where there was no one to hear it? Likewise, it might have been asked: could magnificence exist without an aesthetic sense to respond to it? Yes. Here was magnificence—but vacuous and futile.

There was no further time left for either observation or conjecture as the ship lowered swiftly now for a landing, obedient to the radar control impulses transmitted from the launching station itself. The impulses were being relayed, he knew, through cables connected with the tiny transmitter and receiving cupola on the edge of the known area of the Moon. He marveled at the accomplishment, in-

asmuch as the cable-laying job must have been done by hand and cost many lives. It was at least a fifty-mile extension.

The launching station lay deep within the sheltering walls of a small crater, to protect it as much as possible from meteors. On top of the crater walls were several auxiliary transmitters capable of relaying control beams to the rocket bombs, once launched, to a point where they could be guided Earthward by the other transmitter. A sectionally composed metallic "blister" below indicated the station itself. Outside, also resting on the floor of the crater, were exposed launching cradles.

Just as Flannigan's ship landed beside the "blister", he noticed some blackened areas where previous Russian rockets had evidently landed and taken off. But much more eloquent of the sacrifices made were the fifty or so bloated corpses of previous human volunteers he saw piled up near one of the crater walls.

He could well imagine what had happened. They were probably not all volunteers. Many had no doubt been assigned to this project without any knowledge of its location. Having arrived, they had been forced to accomplish their work in return for a promised salvation, which had come in the form of asphyxiation or fatal radiation infection. Then trusted suicide volunteers had divested them of their nonexpendable space suits. Empty space suits had returned to Russia.

Dying men who had faithfully served the Cause were expendable. They did not deserve a last week or so back on Earth. Instead of the rich rewards they had been promised they spent their last living moments suffering a concentrated form of hell. Then—oblivion, leaving their tortured

bodies alternately to bake during the long lunar days and then freeze solid during the long nights. Without oxidation there could be little decomposition. Flannigan gazed with horror on a graveyard where the dead were neither buried nor carried by Nature into the dust from which they had evolved. He reflected grimly that if he did not do something to put an end to the moral-social depravity he saw demonstrated here, where the End justified the Means, then Man's divine heritage and purpose would soon be an open grave, exposing its ugliness forever to the heavens.

But what could he do?

On the day he landed, six victims were executed in Sherman Oaks, on Earth. During the second day he thought about seven more who were shot, and the eight to be shot on the next. He could easily have wrecked the station, but that would have cost him ten thousand American lives, according to Stalin's grim promise. That the threat would be carried out to the letter he had little doubt. Yet, if he did complete the station and install the bombs, Earth's enslavement would be guaranteed. Any insurrection could cost the opposition an entire metropolis with a much more deadly certainty than was the case with ordinary atomic bombs. On the other hand, he reflected, was the enslavement of Earth not a foregone conclusion anyway, considering the space ship fleet the Russians were building, and considering especially the existence of that other robot, dominated by the representative of an ancient supernian civilization?

Flannigan was assailed by a loneliness that was maddening. The remote-controlled space ship had returned to Earth. He was a robot, alone on the Moon, with the fate of the world lying in his hands like a

wailing child—and he did not know what to do about it.

There was only one direction his thoughts could take. Logic pointed firmly to an escape from the Moon, to a return to Earth. If he could manage that, he would put all his eggs in one basket and perform a one-robot blitz against Moscow, in the hope of being able to destroy Stalin or capture the other robot.

Or better yet, if he could bring one of the space ships into Allied hands, then the tables might eventually be turned. But how capture a ship when the only available one was a flying booby trap? The only solution, he reasoned, was to take a chance. Failure would be better than not trying at all.

First, however, he would complete their station for them so that the executions at Sherman Oaks would cease. And this he did, after ten Earth days of unceasing labors—labors which might have taken six months of time without robot help, and perhaps two hundred more human lives.

On the day the space ship returned with a bomb load, the totally unexpected occurred. Flannigan had installed all but one of ten bombs, each of which would have weighed six thousand pounds on Earth. He had carried them to the cradles himself. One bomb remained on board the ship, and the ship waited, like another automaton, to be completely unloaded of its deadly cargo.

SUDDENLY, Flannigan looked up from his labors to see the ship rise into empty space far above him. It had taken off before it had been unloaded! He wondered if this signified that some emergency had come up back on Earth. He hoped it meant the Allies were opening up with some new weapon. He wished now he had

destroyed the ship, even at the cost of his own annihilation.

In the control "blister" there was a transceiver with which he could contact his overlords in Russia. He started toward the "blister's" airlock with this idea in mind when he was struck with a new thought.

Maybe he could tamper with the transceiver and get away with it. He might also put in new wave traps on the relay transceiver fifty miles away, in view of Earth, and communicate with the Allies on secret U. S. military UHF wavelengths he had become familiar with during his rocket test pilot days! If he could do that, he could tell them how to set up a remote-control unit to take over this launching station themselves! Then they could use it against the Russians! Just one of these hydrogen bombs could wipe out Moscow entirely—and that would include their embryonic space fleet!

A dark shadow of remorse concerning Mnir'ra assailed him. If the other robot were destroyed, then she, too—

When Flannigan rounded the "blister" to approach its airlock, he almost collided with the gaping muzzle of a pneumatic bazooka, obviously designed to operate in a vacuum. Holding the bazooka was a space-suited human. He noticed, about the other's waist, some regulation electrical lineman's gear and clippers, and hanging from the belt was a sample of the multiple cable that led to the relay station! The line had been cut! Moscow would interpret that as tampering on his part! He started to think about the ten thousand American lives that was going to cost, but then he saw the other's face. It was Bob Lee.

No smile of recognition met him. Lee scowled, with the deadly glint of murderous hate in his eyes. There

was no way of communicating with him, as Flannigan was not wearing a suit. He reflected that this fact alone must have magnified him in Lee's eyes as alien and inhuman.

Lee motioned to him, directing him to walk toward the wall of the crater. Evidently a rocket ship awaited them beyond the crater somewhere. He was being taken captive. But the last time he had seen Bob he had been a Russian prisoner. Flannigan wondered how he had escaped. He discerned markings on the space suit signifying that Bob was in the service of a technical branch of the United States Army Air Force. He was being taken prisoner as an enemy to the Allies! Flannigan also noticed, with remorse and grim understanding, a small skull insignia under Bob's regulation markings. He was a *kamakaze*—engaged in a mission that was expected to cost him his life. If he succeeded in returning to Earth with his prisoner he would live three or four weeks at the most before radiation poisoning killed him. This particular crater was lousy with hard radiation.

But a startling thought interrupted his thinking on this subject. The Russian space ship! If Lee had cut the relay cable, the ship was not operating under remote control. That meant that somebody was in it now, trying to pilot it home. No doubt Lee had been accompanied by another volunteer, and the latter had taken the Russian ship with the logical intention of bringing it back into Allied hands. Flannigan prayed that the booby trap on the ship had to be triggered by remote control. Because if it were self-activating—

At that precise moment, Flannigan and Lee were engulfed in a blast of searing white light from far above. Flannigan thought briefly of surprising Lee, because he looked upward at the exploding space ship. But almost

as swiftly as he had looked up he looked back at Flannigan through tears of bitter rage.

Again, he motioned him toward the cliff. Obviously, the Earthman thought Flannigan had something to do with the booby trap that had killed his companion and lost the Allies a desperately needed space ship.

Flannigan started obediently toward the crater wall, followed by Lee. Perhaps, he thought, there might be a chance of explaining once they got on board the Allied rocket ship. That was it! Once inside he could talk to Lee and tell him what had really happened.

Hope soared within him. The Russians would think he had been annihilated by the explosion of their space ship. Instead, he would be returning to Earth, to the Allied side! The Allies could still commandeer the rocket launching station through remote controls that he would help them establish! He even knew something concerning the principle of degravitation used in the space ships. In fact, in his own body rested a damaged degravitator. He would permit them to examine it. The battle was not yet lost!

Or so he thought until they reached the rocket. Lee motioned him into the airlock and he obeyed. Which turned out to be a mistake.

It was a dummy airlock, the real one being located on the opposite side of the ship. When he climbed into the dummy lock he found himself surrounded by thick walls of steel. Before he could turn around, a vault-like door closed behind him. He pounded on the thick walls, but to no avail. He could dent the steel surface but he could not break out.

Very obviously, Lee had come to the Moon specifically to effect his capture. Perhaps Louise had informed

U.S. Intelligence about his degravitator, he thought. Or perhaps they considered him to be vitally important from half a dozen points of view. At any rate, Lee had made good, and Flannigan was unable to communicate with him until they returned to Earth.

He hoped for better luck then.

The rocket landed without incident somewhere in Allied territory. After several hours of waiting, Flannigan began to assume that they were preparing a special method of receiving him. He contemplated the possibilities of escaping them and obtaining a point of vantage from which he could bargain. But he rejected this, concluding that it would suffice to be able to talk to Allied authorities when they questioned him. After a length of time that could not be adequately determined, he became aware of movement. The rocket was being laid on its side, with the door of his prison facing upward. Another delay followed which he estimated to be half an hour. Then a three-inch aperture appeared in the center of the door above him. A thick plug had been unscrewed. Air rushed into the vacuum that had surrounded him.

Taking advantage of this, he shouted, calling for help. Through the hole he saw steel girders and a double track made out of heavy I-beams. Along this track traveled an overhead crane. Slowly, it came to a stop above him, and when he saw what it carried he tried to scream, to express sheer mental anguish.

But robots can't scream, even if you start pouring molten metal on them when they are trapped in a steel box from which there is no escape....

L EAD HAS a melting point of 327 degrees Centigrade; gold melts at over 1000 degrees Centigrade. It was a fortunate choice, lead. Although it

ruined Flannigan's rubber-plastic disguise it did not melt his gold laminated outer covering. Yet at the same time it effectively arrested any possible movement on his part after they had poured the dummy airlock full of it and allowed it to cool. Also, lead was easy to cut open, in sections. They could work on him sectionally.

Fortunately for Flannigan, the myriads of tiny condensers connected into his intricate electronic circuits were not the conventional types constructed of foil, wax and paste, as otherwise he might have been destroyed functionally by the temperature to which he had been subjected. On the Moon he had withstood boiling temperatures during the lunar day without detriment. In this instance also he withstood the heat, though it exceeded four hundred degrees Centigrade.

But with his head encased in lead he could not communicate with his new captors! Thus, a new period of mental anguish began for Flannigan. He was aware of being tampered with. A large section of his back had been uncovered. He remembered having told Louise about his degravitator. That's what they would be after. As a matter of fact, he wanted them to save it, but not under these conditions. With his help and slightly superior knowledge of the subject, he could have saved them precious time. Moreover, without his direction they could damage other internal parts of him.

And when they solved the principle of the degravitator, then what? Allied space ships, given time—but no blue ray. If he could only communicate with them concerning the launching station!

Bob Lee had merely put it out of commission in such a way as to preserve it for future investigations, but they knew nothing about its ingenious

triple harmonic combination FM and AM carriers, and before they solved the problem the Russians would take it over again and also bring their space fleet into action.

Beyond this there was the issue of Stalin's threat to assassinate ten thousand American prisoners in retaliation for tampering with the lunar station. And there was Bob Lee, by now fatally afflicted with radiation poisoning and firmly believing him to be an enemy. And Louise—believing the same thing, hating him, considering him in the same light as the technicians who worked on him, expendable except for his degravitator.

Flannigan could think, offhand, of about twenty good reasons why he had to get free and take action, chief among which was to adapt the lunar station to Allied use before the Russian space fleet swung into action. It was the Allies' only chance, because by now at least one or two more Russian ships were probably going through their test flights, and the hydrogen-bomb threat would be the only means of forcing a compromise. He reflected that there might be a thousand reasons for getting free, but how could he do it? He could not move. He could not communicate.

I can't get free!—he thought to himself in helpless desperation.

The thought repeated itself: *I can't get free!*

Where had he heard that before? He remembered his arrival on Earth, when Mnir'ra had tripped him in the airlock and he had fallen free without benefit of his degravitator.

He heard her again as she cried, "Help, Flan'ri! I can't get free!"

He remembered also his subsequent interpretation of that cry. She had called to him in an attempt to convey the idea that she was a captive, mentally, of that other, ancient personality.

His thinking processes froze with shock, just as he became aware of a plate being removed from his back by the Allied technicians. If he could have stood up and articulated he would have shouted, "*Eureka!*"

Carefully, swiftly, he retraced his thoughts of a moment before. If, latent within Mnir'ra's robot, there had existed a faint pattern of charges representing the original intellect who had occupied it, then perhaps—perhaps, latent within his own robot brain...

But no. If another entity's residual patterns were there, why had he not been dominated also? In the same instant he perceived a part of the truth. His transference into the robot brain had been of a more permanent nature. He had charged the cells with his own patterns five hundred per cent longer than in the case of Mnir'ra's transference.

It was possible, therefore, that his brain contained the memory and personality—plus the advanced scientific knowledge—of an ancient master mind, of another one of those "secret gods" of which the legends of the green men had told, back on the world of Gra'ghr.

If he could call it up out of Limbo, he thought, how could he control it? Perhaps there was an answer to that, too. If he could lend it strength, maybe he could weaken it also and keep it in check, thus remaining dominant and in a position to force from it any technical knowledge that might come to his aid now.

It was fantastic, he knew, but there was no other choice. Experimentally, he relaxed his mind, trying to lower the barriers and be as receptive as possible. But his anxiety only caused greater mental tension, while the priceless seconds flew irretrievably by and the ominous probings into his dorsal region continued.

Stalin's gray, impassive physiognomy passed before his mind. Ten thousand American prisoners lining up in San Fernando Valley before the executioners. Mnir'ra, his lost love, wandering, herself, in Limbo. *Russian space ships and a blue ray of destruction hovering over the world. Two feet of relay cable—on Bob Lee's belt—separating nine hydrogen bombs from the Earth. Nine bombs. Nine major cities. Coercion, violence, enslavement.

Flannigan wanted more than anything else to yell, because it seemed that was the only antidote for insanity.

Then, dimly, as though out of the Nadir of Creation, an alien thought ascended to the level of his consciousness. It was wordless, but it carried unmistakable meaning.

The entity he sought was there. Furthermore, it was willing to help. Definitely, it *could* help him in his present extremity.

The alien thought grew stronger. Flannigan cringed, mentally, before his sudden awareness of dual identity. Another mental presence soared upward, nameless, dark, as though bat-winged, out of a dreaded Nether World beyond human comprehension.

Be not afraid, came the clear thought of the other, inside his own mind. *I am Ktar Nom. You are in contact with one who has lived beyond your concept of eternity. With age, wisdom is born, and wisdom is not the mother of deception and violence, I assure you. I will not dominate you, Michael Flannigan. Even if I willed it I could not. Did you not know that the roads of your destiny are almost as long as mine? You are of a more ancient line than Mnir'sr Nikinra, or Altinra, as she was called in a previous time. You are descended from Gur, from the mighty Djir Nal-at, than which there are none*

more powerful in the planes of Sar. As such, your mind, your total identity, can never be destroyed or even easily dominated. Until you willed it, I was powerless to act—even in your behalf. But now I can.

Here was the beginning of an answer to the whole riddle of the Lens, to the riddle of Flannigan's curiously predestined life—an answer which had been his supreme goal. Yet, there was no time to dwell on it now.

He posed a question. Was Ktar Nom aware of his present predicament?

I am, came the immediate reply. *And it is a vital one. He who dominates Mnir'sr now is a young renegade, an evil youngster whom I followed, in ages past, to deter him from his destructive and sadistic intentions. Unfortunately, I fell victim as he did to the treachery of the priesthood of the green man, both of us lay in suspended animation until the day you found us, within the Lens. We must conquer him now, without delay.*

Flannigan cynically expressed the thought that it would be a good trick if he knew how. Whereupon Ktar Nom explained that he was one of the original builders of the robots, and that he knew all their secret abilities.

There is a secondary brain equipped with faculties which are foreign to your human mind. I will activate those faculties, with your permission.

All of which suddenly altered procedures within the confines of the laboratory where Flannigan had teetered on the brink of a disastrous "vivisection".

BOB LEE sat up in his hospital bed looking at Louise, who sat near his feet. He had just come out of another morphine sleep and the inexorable, itching fire of radiation

poisoning began to make itself felt again. Yet, he was able to sympathize with her own sufferings.

"I wish I could take you in my arms," he said to her, "and kiss all the rainclouds out of those big, blue eyes, but I can't! That's the hell of it!"

Louise looked at him hard and bit her lower lip to keep her chin from trembling. Why trouble him with her torturing thoughts? In love once with Flannigan, who had heard sirens singing in the Moon. Now in love with a normal, Earthbound American at last, only to see him dying, as Flannigan had been, of radiation poisoning!

She thought for a moment that it might be worth while to be in his arms in spite of the danger of contamination, but she was interrupted. The radio, which had been playing soft music, suddenly brought them the voice of an announcer, and she quickly turned up the volume.

"We interrupt this program to bring you a special news bulletin: Allied Command Headquarters announced tonight that the robot, Michael Flannigan, has escaped!"

Bob Lee straightened up and yelped. He and Louise stared at each other, dumbfounded and alarmed. Then they both stared incredulously at the radio.

"By means unknown to our science, he succeeded in placing the entire laboratory staff that had been studying him in a trance under which they acted to remove him from the block of lead in which he had been encased. This was determined by an examination of the laboratory's furnace shortly after his escape. All personnel subjected to the trance appear to be suffering from an induced amnesia and can remember nothing. This condition seems to apply also to various other military

and civilian personnel who subsequently came in contact with him.

"Here is another bulletin, ladies and gentlemen, which supersedes the foregoing! This is a red flash! Flannigan put in a sudden appearance at Wright Field tonight and forced scientists and fueling crews to refuel the Moon rocket in which U. S. Army Airforce *kamakaze* pilot Bob Lee originally captured him! He has succeeded in actually taking this rocket off the Earth! It is believed—"

Lee turned the radio off and grabbed the telephone.

"Darling!" protested Louise. "There was more!"

"No time to listen," he answered, jiggling the phone desperately. "I know the rest. Hello! Get me General Kaye at Wright Field! This is a vital emergency! No buts! Move!" He signalled to Louise with his free hand. "My clothes," he said. "I'm getting out of here!"

Louise's delicately shaped brows arched, quizzically. "But Bob, you're—"

"About to die?" he cut in, talking between his teeth, his eyes glaring at her. With his free hand he lighted up a cigarette. "Why lie around and wait to die? I can die with my boots on just as well, in fact better! Get me those clothes, Louise!"

"Bob, I didn't mean—"

"Hello! General Kaye? This is Bob Lee. I heard about— The hell you *can't* talk to me now! I'm telling you to listen!... What? Exceeding *what* authority? General, a dying man has only one Authority to answer to, so don't give me that! Now listen! All right! I know the rocket's gone! But England has one they moved to Canada before the invasion. Look! I've seen that launching station, and that's where he's gone. It has nine shiny super bombs in it with the names of nine Allied metropolises on them, be-

son appeared. The general waved the envelope at him. "Where did this come from?"

Henderson only saw the envelope. There was no return address. "Why, in yesterday's interoffice mail, sir. It was addressed to you, so I—"

"You fool!" snapped the general. "How long has it been sitting here on my desk? Never mind! Stand by! This is an emergency!" He threw a switch on the short wave transceiver and barked at his aides in Montreal. "Stop that rocket!" he yelled. "Tell them to turn back and land!"

When he flicked the switch again, Montreal was spluttering. "What's gone wrong, sir?" replied a startled voice. "The rocket took off twenty minutes ago. It's beyond escape velocity now."

"Don't argue with me, Colonel Higgins, or I'll have you court-martialed! I don't know how he managed to mail this, but that robot Flannigan has sent me a letter! He's no enemy; he's an ally! And Lee is commissioned to destroy him on sight! Listen! Flannigan is going to the Moon to revamp that launching station so we can use it ourselves! He's telling us to throw a control unit together and he's given the frequencies and even the schematics! If Bob Lee bumps Flannigan it may be curtains, so haul him back quick! What am I talking about? We can try to get him from here! Forget it! I'll take over! Henderson!"

"Yes, sir?"

"You heard what I said! Contact Lee's ship and ground him!"

Which was more easily said than done. By the time Wright Field operators ascertained the correct transmission frequency and got into operation sufficiently to expect contact, they discovered that the Canadian rocket was out of communication. Observatories reported the ship

well on its way and apparently in good condition, but the opinion was expressed that a small meteor might have damaged its antenna.

Then it was that General Kaye showed Flannigan's notes to other government authorities and more writing was found on the back of his second sheet:

Of course we are hoping that our action will be well publicized so that the Russians will try to intercept us. Our main purpose is to act as decoy for one of their new space ships, which should be about ready to operate now. That we shall deliver into your hands—God willing. But if you can get your own remote controls established in time you can use the lunar hydrogen bombs to blast Moscow before their main fleet goes into action. We'll try converting the station for your controls, which we have changed slightly on the schematics to get around Russian interference, and we'll try capturing a Russian space ship if one shows up.

"Henderson!" barked General Kaye into his intercom.

"Yes, sir?"

"Keep trying to ground Bob Lee!"

"We're trying, sir, but no contacts as yet."

"Don't give me excuses! Tell those operators they're dabbling with ten chapters of the future history of Man!"

"Yes, sir!"

Impatiently, General Kaye clicked off the intercom and turned to face the officials crowded around him. He

cause Flannigan's competing with his robot twin over in Russia for domination over the Earth, and that's the way he'll start. I want to fly that English rocket up there and take that station away from Flannigan and the Russians. With that in Allied hands we could make Stalin and his robot side-kick come to terms. It's our only chance, before their space fleet goes into operation. To hell with other volunteers! I'm a natural for you and you know it! If I'm only good for a couple of more weeks, why not use me to the best advantage?"

Louise was getting Bob Lee his clothes, but a determined new glint had suddenly crept into her eyes....

IN SAN FERNANDO Valley the entire occupation garrison was engaged in the task of quelling revolts on the part of the civilian population. The main activity had centered around a pitiable army of ten thousand Americans who had been forced to dig their own community grave. It extended from Fulton to Van Nuys Boulevard, six feet wide, four feet deep, a trench in which was to be buried the end product of one of the greatest mass killings in history. Three trucks mounting machine guns stood ready at one end of the trench. Captain Moto and his men were busy lining up the victims, many of them women and adolescents.

But at that moment a tired Major Balaknin drove up in his battered Buick convertible and halted the procedures.

"Suspend the operation," he ordered.

Captain Moto slumped, visibly. "Why, sir?" he asked.

"It seems Flannigan did not tamper with the lunar station. It was Lee."

The thought of the destructive power of the launching station lighted

Moto's eyes with a sadistic eagerness. "Aren't we going to repair the station?" he asked.

"Perhaps," replied Balaknin, "unless Flannigan beats us to it, in which case this trench the prisoners have dug will be used, after all. Flannigan knows the price he must pay for tampering with that station."

"Flannigan! But the Allies captured him! I thought it was Lee himself who—"

"Flannigan has escaped, and he's on his way back to the Moon."

"But what about our new space ship?" persisted Moto.

Balaknin shrugged. "It will undoubtedly follow him. But I believe it was grounded temporarily after its flight test. If they can get it into action fast enough, there may be a chance to intercept Flannigan. Otherwise..."

The two men looked at each other in eloquent silence.

THREE DAYS later, Air Force General Kaye picked up a peculiar-looking envelope from his desk, bearing neither postmark nor stamp. He opened it disinterestedly, as his mind was occupied with worries concerning Bob Lee and his companion who had just taken off from Montreal in the English rocket. His bloodshot eyes surveyed the several sheets of paper and the notes and electronic schematics scrawled hastily in pencil. He hardly saw what lay before him as he was busy listening to a short wave eye-witness report of the take-off, which operation, owing to a special UN disposition, came under his command.

Suddenly, as he gazed at the sheets before him, his eyes widened. He grabbed the papers and stared at the signature: *Michael Flannigan!*

"Henderson!" he yelled, and almost in the same instant Captain Hender-

held out the last message he had read. "What I'd like to know," he said, slapping Flannigan's writing with the back of his hand, "is who the hell is we?"

KTAR NOM impressed upon Flannigan the vital necessity of converting the lunar station before any new Russian space ship could put in an appearance. In regard to the penalty of ten thousand American lives Stalin said would be exacted in retaliation for tampering with the station, Ktar Nom had implied that once either one of their two objectives was achieved, Americaps would no longer be prisoners. That Russia would be forced to come to terms, including Stalin and his robot ally. Objective number three, of course, was the unfinished space fleet in Moscow.

The somewhat battered American rocket made a crash landing near the crater they sought. Flannigan was painfully aware of the fact that two hundred and forty thousand miles was an awful abyss of distance, but Ktar Nom was not discouraged.

Being marooned here is all the better, he commented, as Flannigan walked toward the crater that concealed the launching station. *Now you have a still greater incentive to capture the other space ship when it arrives.*

"If it arrives!" Flannigan articulated, but no sound came from his metallic lips inasmuch as he moved in an airless world.

It's bound to arrive, replied Ktar Nom, *for the simple reason that it can't afford not to! Your escape will have been publicized and Stalin will undoubtedly hear about it and foresee your purpose in returning here. It's an inevitable conclusion that he*

will dispatch a volunteer crew in one of the space ships—so we'll have to work fast.

"I hope that buck private at Wright Field delivered my message to General Kaye," said Flannigan, again soundlessly, as he climbed the crater.

He had to, returned Ktar Nom. *I planted the command so strongly in his mind that he would either have to deliver it or go insane with frustration. Don't worry. It will get to the General.*

Flannigan stood on the crater's rim near one of the relay cupolas. He looked across it toward the grotesque horizon of the other side of the moon, and he was assailed by a sudden horror of being marooned in this petrified, airless devastation, in this unborn world that was a part of the unwanted dregs of the material of Creation.

Below him, inside the crater, the launching station lay intact, just as he had left it. And the bloated corpses at one side had not changed either. He wondered, as he began his descent, if it would have relieved him to be able to shudder.

After forty-eight hours of intensive labor, using much of the U. S. Army Air Force electronics parts and equipment taken from laboratories at Wright Field, and also using a few special short cuts Ktar Nom showed him, Flannigan succeeded in converting both the distant relay transceiver and the launching station itself. But when they probed Earthward on the slightly altered beams, hoping to pick up a response, they were met with a dead silence.

Flannigan cursed. He was sure General Kaye had not received his message. But Ktar Nom patiently insisted that the letter must have been received and that the necessary re-

mote-control equipment was being assembled.

Give them time, he advised. *You will see.*

"But in the meantime," Flannigan said, his voice echoing metallically inside the air-filled control "blister" of the station, "we're giving the Russians time to get here."

All the better, Ktar Nom replied. *You don't want to be marooned here, do you?*

"Okay, but what's your plan? If a Russian ship shows up, how are we going to defend ourselves against the blue ray?"

AT THAT precise moment, Flannigan's attention, as well as Ktar Nom's, was attracted to the transparent plastic observation panel in the roof of the station. Above, in the exact center of their field of vision, a spherical space ship hovered. It was only a thousand feet above the crater.

Flannigan—Ktar Nom started to say, but he was interrupted by the loudspeaker of their receiver, which Flannigan had just adjusted to the Russian frequency.

"You will emerge from the station," came a vaguely familiar voice, speaking in uncertain English. "If you do not come out and surrender I will come in after you."

You see?—thought Ktar Nom, inside Flannigan's mind. *They still value the station too much to blow it up. The Russian wants us to get clear of the station so he can eliminate us. Don't do it! Let him come here and we'll take him!*

"How do you know he'll be such a fool?" asked Flannigan. "He must know what I am."

Look!—came Ktar Nom's startled thought.

Flannigan was necessarily looking in the same direction, since the two

of them were both using the same pair of eyes, and he saw the Russian ship moving downward and out of their field of vision. "He's going to land, but why not inside the crater?" *He doesn't trust you. He thinks if worse comes to worse you might blow up the station. He is an expendable volunteer, but his ship is not.*

"And so he's going to come on foot himself," said Flannigan. "He probably has another bazooka or something, like Lee did when he captured me."

We have a defense against that, replied Ktar Nom. *Allow me to activate you.*

When Flannigan did so, he found himself in front of the main panel controlling the hydrogen bombs. Before he could resist, Ktar Nom had guided his hands to the controls. Lights flickered on the panel.

"Hey!" yelled Flannigan. "You launched a hydrogen bomb!"

He looked through the ceiling port where automatic impulses would guide it Earthward.

"What did you do that for? Are you crazy? Without a remote control unit on Earth to guide it, that bomb may land anywhere!"

It will take over thirty hours to reach Earth, replied Ktar Nom calmly, *and we can guide it off course toward the sun at any moment during that period. In the meantime, the fact that you and I are the only ones outside of Wright Field who are acquainted with the new control frequencies should prove to be a nice bargaining point when our would-be captor arrives. You can tell him it is headed straight for Moscow. Tell him that unless he surrenders to you both himself and his ship, you may not be inclined to divert the bomb's course.*

Flannigan was looking up through

the ceiling port. "Good God!" he shouted. "Do you see what I see?"

Necessarily so. It is another Allied rocket. A very unfortunate and delicate time to put in an appearance.

"But there was no other rocket to my knowledge."

Far above the crater, but lowering swiftly, was the nova-like patch of brilliant light that marked the driver tubes in full deceleration as the rocket came in stern first for a landing, its gyroscopes holding it easily perpendicular to the lunar surface. Flannigan noticed twin drivers.

"It's the English rocket they were working on when I left Earth on my return trip to the Lens! Now what in blazes—"

If the Allies are still seeking to intercept you, reflected Ktar Nom, that would mean your message was not delivered to General Kaye after all. But I can't understand that. Perhaps they left before your message was discovered.

"Then General Kaye would have had them called back," said Flannigan.

Unless their radio was not working, replied Ktar Nom.

It would have been useless to try communicating with the pilot of the rocket, Flannigan reflected, because he would be near to unconsciousness by now owing to the pressure of deceleration. He might not even be aware of the Russian space ship or the hydrogen bomb, which was now speeding Earthward at eight thousand miles per hour.

Let's get out of here! warned Ktar Nom. *That rocket is headed straight for this crater, and if it crashes on top of those bombs there'll be a mess for miles around! Outside the crater, though, you could survive the blast where a human could not.*

Flannigan was already outside and running toward the crater wall with

great bounds but then, suddenly, he stopped. "That hydrogen bomb!" he articulated soundlessly in the lunar vacuum. "We should have diverted it from its course!" He looked at the station hesitantly, then upward at the rocket.

Run! came Ktar Nom's insistent thought. *It's out of fuel! It's falling free!*

It was too late to run. The rocket fell swiftly a remaining five hundred feet and, though it weighed only one-sixth what it had on Earth, it packed a mountain of momentum. It came crunching down one side of the crater and crashed silently in front of Flannigan. Fuel tanks and rocket tubes spilled out into the open, cracked and broken. Some liquid oxygen boiled violently away into the vacuum of space. There was no combustible fuel left to combine with it.

Above the rocket, on the crater's rim, a space-suited figure stood looking down at the scene. He carried a pneumatic weapon of large calibre.

There is your Russian pilot, came Ktar Nom's thought to Flannigan. *Eliminate him and you'll have a space ship!*

Flannigan scrutinized the distant figure, which stood there motionless, looking down at him. He started slowly to walk toward the cliff and the battered rocket. As he did so, the Russian began slowly to descend the path that his suicidal predecessors had carved out for him.

But at that moment the hatch on the upper side of the rocket opened and two space-suited figures leapt into view. One of them carried the same type of pneumatic bazooka that Bob Lee had used to effect Flannigan's capture previously.

Without hesitation, the bazooka-carrier raised his weapon and aimed it at Flannigan. Flannigan jumped just in time as a violent explosion

ripped a fox hole open in the crater's floor. He came in under the hull of the rocket. From his new position he could not see the two above him, but he could see the Russian. The latter was raising his own weapon and aiming at the two rocket pilots. But in the same instant a bazooka shot struck the rocks just above his helmet, and he fell, his face-plate smashing apart as it struck other rocks in front of it. Flannigan saw the faintly discernible cloud of air that escaped from the suit in one swift blast.

So the Russian was eliminated anyway, reflected Flannigan. "Hey, Ktar Nom," he called to his secret ally, "better use your special faculties on those two."

In the same instant, he saw the two pilots slide off the end of the hull and land lightly on the floor of the crater. They were not ten feet away, and they stood there with the obvious intention of taking him prisoner.

Flannigan braced himself to wade into both of them, but then he saw their faces behind their face plates. One was Bob Lee, the other Louise Daren.

In that moment, the battered hull of the rocket slid off the rocks and crashed down on top of Flannigan, pinning him to the ground. He struggled, but he could not get in the right position to give himself a proper mechanical advantage. Tons of steel held him fast.

He looked at Lee, noted that he discarded the bazooka. Evidently he had only carried two charges for the weapon, and now it was useless....

IT WAS Ktar Nom's turn to take action. Through the hidden, secondary mental faculties of the robot which only he could operate, he com-

municated with the two humans telepathically as though he were Flannigan, speaking to them, and Flannigan suddenly discovered that he could read their minds.

He told them the truth of the situation, beginning with the method of coercion which Stalin had used on him in the first place. The two might have interrupted him, but Ktar Nom held them in an inescapable mental grip, impressing upon their minds indelibly the facts which he felt it was necessary for them to grasp. He concluded by repeating the message which had been given to General Kaye.

Under my guidance from here, he telepathed to them, you will enter the station and divert the hydrogen bomb from its course. Then you will take the Russian space ship to Wright Field. Tell them their first objective is a double one. They must destroy not only the Russian fleet, but the other robot as well.

Flannigan caught Louise Daren's objection. To destroy the other robot would be to destroy Mnir'ra as well.

More important to me, Ktar Nom answered for Flannigan, is the safety of the Earth. Earth cannot be safe as long as that other robot remains at large, because it is a deadly menace.

Suddenly, Flannigan saw Louise and Bob Lee turn pale as they looked at something that was beyond his limited field of vision. He saw Louise screaming inside her helmet. Ktar Nom relayed her thoughts to him.

The dead Russian! His face-plate was gone, there was no air in his suit, but he was on his feet, walking toward them with no other weapon than his hands! That face! It was Stalin himself!

"No, not Stalin, came the other robot's thoughts to all of them. Stalin has been dead for three years, but

the Russian Politburo feared to admit it, so it was a simple matter for me to take his place, as well as to acquire a fluency in the Russian language. There were very few who knew the secret, so I eliminated them, and then there were none to doubt that I was actually the real leader of Soviet Russia. It was very convenient. Flannigan, your buzzer was broken when you first landed. Otherwise you would have known it was I when we met face to face in Moscow. I thought you could be used, but I should have destroyed you then."

While the other robot telepathed to them, the two humans backed slowly away toward the station. Ktar Nom caught Bob Lee's thoughts and relayed them to Flannigan. He was urging Louise, over his walkie talkie, to make a run for the other side of the crater—to get up and out of it and take the Russian space ship. Lee stood there on the crater floor, blocking the space-suited robot's path as Louise backed swiftly away.

Now Flannigan could see the other robot as it advanced upon Lee. He could also see that Louise had no intention of running away. Instead, she ran to the control station and let herself in the airlock. The robot hastened its steps.

Ktar Nom suddenly made full use of the secondary brain in Flannigan's robot body. As a result, the other robot's movements slowed considerably, but they did not stop, as would certainly have been the case had it been human. Lee, however, was able to dodge the blows that were aimed at him. He could even run around behind the influence, it rose slowly and moved onward toward the station.

Finally, it reached the airlock and opened it. Flannigan struggled to get free of the weight that pinned him to the ground, but he could not budge,

Then he was reading Louise's mind, with Ktar Nom's assistance, as she challenged the other robot. She had not mastered the controls, but she did have her hand on an emergency switch which would detonate all the hydrogen bombs in the station. Ktar Nom had guided her to it. If the other robot did not surrender at once, she would blow them all to atoms.

After an intolerable pause, the other robot replied, *"How can I surrender? What do you want me to do?"*

Bob Lee furnished the answer to that. He could go outside and help Flannigan get out from under the rocket ship.

Responding to the irrefutable logic that it would be of no use to itself if vaporized in a titanic explosion of hydrogen bombs, the robot followed instructions. It put its shoulder to the mass of wreckage, and with some help from Flannigan the desired result was soon obtained.

In that instant, Ktar Nom took over Flannigan's body, with his consent. He stood there facing the other.

Turn around, he commanded. This is Ktar Nom speaking to you now, so don't try any of your tricks. I know them all!

"Ktar Nom!" came the other's startled thought. *"Don't destroy me!"*

You deserve destruction, but you have my word on it. Do as I say and you will not be destroyed.

"I have known the strength of your word in the long dead past," replied the other. *"If you give it, I will do as you ask."*

By way of reply, Ktar Nom tore away the tough fabric of the robot's space suit as well as the rubber plastic coating of its metal body. He deftly manipulated a hidden spring under one of its dorsal plates and it became

a motionless statue, completely incapacitated.

ONE HALF hour later, Flannigan was inside the lunar station with Bob Lee and Louise Daren. The two humans had taken advantage of the air and warmth by removing their space helmets, which permitted them all to converse.

"Why," said Flannigan to Bob Lee, "did you permit Louise to sacrifice herself this way?"

"It was not Bob's doing," replied Louise swiftly. "The Air Force thought I'd have a psychological effect on you, that I might be able to appeal to the Michael Flannigan in you. Besides that, there were purely personal reasons. It's not every day one has a chance of committing suicide and being constructive at the same time."

As Flannigan looked too long into the depths of her blue eyes, she changed the subject. "There are more important things here than idle conversation. Keep working on that transceiver!"

At long last, Flannigan contacted Wright Field and was able to give them the news concerning the simultaneous capture of the other robot and a Russian space ship. Then he warned them about the hydrogen bomb and asked them if they wanted it diverted.

"We've got it riding on our own beam," came General Kaye's enthusiastic voice, "and airborne radar is tracking it nicely toward Moscow! You stay right there while we hand out ultimatums. We may want some more hydrogen bombs. Once their fleet is definitely out of the picture, we can finish up operations with your ship!"

All of which did not serve to minimize one bitter reality: Bob Lee was close to death, and Louise Daren's

days were as definitely numbered.

"Now look here," said Flannigan. It was Flannigan's robot voice, but Flannigan knew that Ktar Nom was really doing the talking. "Some changes are going to be made. Right now your major concern is the freedom of Mankind. That freedom is about to be guaranteed, with the destruction of the Russian space ship before it gets off the ground. We will pilot the other ship we have captured back to Earth, and with it we will reduce Communist resistance to a point where the Allies can take over. But we will not land on Earth."

Bob Lee, his face drawn with his suffering and eyes deeply blood-shot, asked him what he meant by that.

Flannigan looked into the eyes of both Louise and Bob, but it was Ktar Nom who answered: "Take my word for it. Earth civilization is not yet ready for the responsibility of real interplanetary travel such as that ship would give it. It will be ready to reach for the stars when Human society has caught up with its own technological advancements—not until then. Moreover, unless help can be obtained, the Earth is doomed anyway. You see, true to the predictions of some of your contemporary and past scientists, the atomic explosions which have already occurred since early in the 1940's have precipitated a slow chain reaction in the upper atmosphere. Within less than two generations, the Earth's atmosphere will be sufficiently poisoned by hard radiations to cause universal death." In an aside to Flannigan, Ktar Nom thought: *I have seen this happen before on other worlds.*

"If this is true," said Louise, "what help can be obtained? You implied that was possible."

"Among the stars there are other worlds. On some of those worlds are highly advanced civilizations. Some-

where, some advanced science may be able to offer us a solution. There may be a way of dampening that build-up of radiations just as a chain reaction is slowed in an atomic pile."

"But that's a trip for a robot," said Bob Lee. "Humans can't travel in space. The radiations kill them off. Instead of talking about all this, why don't you get going? Leave Louise and me here. We'll run the station as long as it's needed. There ought to be enough air to last—"

"But you are going with me," said Flannigan, who wondered himself at the incredible words Ktar Nom was putting into his mouth.

"What!" This was from both Bob and Louise.

Flannigan, thought Ktar Nom. There is much you are unaware of which those ships can do, with their Titanium-calcium shielding against cosmic radiation and their time-stosis, suspended-animation chambers. Tell them to follow you to the ship. Wright Field can control this station without any help from this end. We'll pick up the other robot when we're ready to leave the moon for good....

THE SPHERICAL space ship was somewhere between Earth's orbit and Mars, traveling outward, away from the sun. Thirty seconds later it passed the orbit of Mars. In ten minutes it was somewhere near Jupiter. No telescope could follow it because its velocity surpassed that of light. A portless, metallic ball streaking toward the edge of the solar system.

Earth had no such ships as this, but there had been such ships in Earthly skies. Three, to be exact. The first had crashed in an atomic explosion, precipitating World War Three. The second had almost succeeded in winning the war for those who refused to believe that the human mind was the private heritage of the in-

dividual and that its self-determination was the sacred gift of its Creator. The third such ship had liberated human thought from enslavement. Now it sped on its long journey outward toward the stars, searching for an antidote to the poison that Man had injected into his own atmosphere....

THE GOLDEN robot turned to its twin, which sat motionlessly beside it before the viewplate and the control banks.

"So Ktar Nom showed me how to build another transference machine," it concluded. "The mind and personality of him who dominated you were reduced to a mere shadowy pattern in you, and your own patterns were brought out and strengthened to a point where you will never be dominated again, Mnir'ra."

The other robot had been cleansed of the rubber-plastic disguise it had worn. As it turned to look at its mate, its golden skin glistened in the lights of the control room.

"Are you still aware of Ktar Nom?" the latter asked.

"Unfortunately, no. I wanted to ask him many questions concerning my connections with Gur and the Lens, but I believe he wants me to infer that the road to those solutions must be traveled on my own. Ktar Nom was voluntarily retired to rest somewhere beneath the level of my consciousness. He has lived so long that nothing much matters to him any more. If I ever need him again, however, I know I can call him back into action."

"And our two human passengers. What of them?"

"In their present state of suspended animation they are certainly much better off than they would be back on Earth where they would only die of radiation poisoning. Ktar Nom says that, owing to the method by which

he obtains suspended animation, radiation reaction cannot occur. We can keep them there until we feel it is safe to bring them out of it. In interstellar space itself there are practically no deleterious radiations, and our hull is highly resistant to penetration anyway. Out there we will permit the sleepers to awaken so that they may join us in our adventure."

After a long pause, Mnir'ra said, "You have not forgotten our original goal, have you?"

"You mean—?" Simultaneously, they both thought of the two human bodies they carried on board, lying in helpless suspended animation, cheating a death that had apparently been inevitable but a short time before, waiting now for whatever fate might bring them. "No," said the first

robot, "I haven't forgotten. Somewhere we'll find what we're looking for."

"Of course," said Mnir'ra. "It's just that—well, I miss you so, Flannigan Kinri."

"Do you need to remind me of my own desire?" replied Flannigan quickly.

The swift vessel plunged onward into the immeasurable depths of interstellar space, where the bridge of Loneliness hangs thinly across an abyss of no reason. In the ship's "Inner Sanctum", Bob Lee and Louise Daren lay side by side under the influence of the time stasis induced by Ktar Nom, knowing not whether they would ever see the stars *with their own eyes* again....

THE END

CIVILIZER—BY AIR

ONCE THE railroads were the harbinger of civilization, so now the aircraft has taken over that role, and tomorrow it will be the rocket, and the day after that...? Aerial transport cannot replace the railroads when it comes to operating a tremendous industrial complex, but it can permit the development of communities where no communities were intended to be. Commercial aerial operations in North America and Europe are too familiar and too standardized to give a true picture of what can be done. You have to go to South America to see how a continent has literally been opened up by the airplane.

Ten or fifteen years ago, vast jungle areas of South America never saw the visit of a civilized man. Today thousands of such lonely untouched areas are thriving communities, thanks to the resourcefulness—and cupidity—of private bush-flight pilots and some organized air lines. It is possible now to take anything that can be loaded in a plane from one place to another no matter how remote. The vehicle which is destined to replace even the airplane for short haul trips is the helicopter.

Because it needs no landing field, no spot on Earth is safe from its depredations. South America, still with vast unexplored and undeveloped areas, is watching enthusiastically the performance of the helicopter in war-torn Korea. The surprisingly good job it is capable of doing has brought hundreds of orders for this unique flyer. With improvements in the helicopter it is very likely that this machine will become a sort of general carry-all, replacing eventually, perhaps, the ordinary bus and truck. When that occurs it will be possible for people to live absolutely anywhere, independent of the roads, nearby landing fields (if any) weather, etc. The helicopter will replace all forms of transportation because it is a gadget that permits you to alter your space-time coordinates at any rate, slow or fast, which is not the case, with the plane.

Nevertheless, the plane today is the basic link between the rapidly vanishing isolated community and the city. Soon there won't be such a distinction between city and country—one place will be the same as another, as long as you can come and go easily.

Salem Lana

JANE DOE

TAKES OVER

MANY A science-fiction story has toyed with the idea of an eventual matriarchy in which the women of the world take over practically all male functions. (Some wits maintain that this grim state of affairs already exists!) While such speculation seems a little implausible in the light of the fact that the give-and-take relationships of modern men and women have been pretty well established, there is ground for thinking that women may have more to say than we think. This is based on the certainty, now and to come, that women do live and will live lots longer than men!

Since 1929 the expected life span of women has shot up fourteen years, and that of men, only nine years—and this trend shows no sign of diminishing! That brings present expected life spans to 72 years for women, 65 years for men. And in another few decades the differences will be even greater.

Now what conclusions may be drawn from these statistics? Basically, it appears that men die sooner because of the stresses and strains they undergo in the process of earning a living. Even when women are in the business and industrial worlds, their

numbers in positions of responsibility are small and they always have a way out—marriage. But the “poor male” does not. He keeps working until the end. Contrariwise, the concentration of wealth and control of wealth is continually sliding over to the distaff side. The result is that women are riding the gravy train. In addition, medicine has taken so much of the danger from childbearing that women's losses on that score are at a minimum. You can't escape it, men, it's a woman's world!

Nevertheless, women are more and more assuming direct roles in business, industry, manufacture, farming, the professions, and even the trades. This means that there is an equalizing factor in operation and perhaps, in some remote future, tensions will adjust things so that life spans come out more nearly equal. It is for this reason, perhaps, that many nations are lowering the barriers and using women in any occupations that men engage in, even, in countries behind the Iron Curtain, in heavy industry.

The next time that sweet, soft, feminine thing tells you how rough things are, just point out that she's the one who's going to live longer!

Omar Booth

YOU'VE GOT TO WRAP IT UP

MODERN methods of distribution have made the packaging of commodities not only an art, but a science and a necessity. Today, the old saw about “you don't judge a book by its covers” doesn't apply to most commodities. You do judge things by the way they're presented, as the advertising industry would insist. This is all part of a general trend which the future will emphasize to an even further extent. Consider food alone. A few decades ago most food commodities were purchased in bulk—today practically everything is individually wrapped and boxed and cartoned and crated and packaged! This has made for sanitation, economy and efficiency.

But foods alone aren't the only object of this packaging procedure. Machinery, vehicles, tools, equipment of every sort and variety are the subject of packing tech-

niques. Perhaps the best example of large scale packaging was the “moth-balling” of warships and planes which our government has found so useful.

Protective paints, completely dry air, clinging oil films, and sturdy crating of wood, paper and steel, can make the preservation of anything almost perfect. It is possible to ship a scientific instrument anywhere in the world with the confidence that it will get there despite flood, fire, storm and the disregard of the handlers.

The future will see an even greater extension of these packaging principles. Everything from meals to drinks will be packaged beforehand because automatic machinery can do those routine operations so well. Occasionally someone protests about “living out of a bean-can” but he doesn't really mean it. It has simplified living.

Merritt Linn



Panic reigned as the invader moved in

THE WINGED PERIL

By Robert Moore Williams



They came in flying saucers, and Mankind seemed powerless against them until one man decided that merciless invaders are always equipped with an Achilles' heel

“BUT WHAT the hell is it?” Quarter said irritably. Wading boots and all, old Simon Pile pulled him out of Silver Creek before he hardly had time to wet a line, insisting that the newspaper man come up to his log house to look at—something. Even after he saw it, Quarter wasn't quite certain what it was.

“It's a bee!” Simon Pile breathed pure rapture, his lined old face softened and grew warm from the inner ecstasy flowing through him as he spoke. “It's a new species never known before. I shall name it *apis pilensis*, in honor of myself, since I discovered it. Look at its size, see how alert it is. Although it is larger than the biggest queen I have ever

seen, it is obviously not a queen, it is a worker. And look at the colors! Have you ever seen anything like it?”

On Pile's face, the ecstasy deepened until he was practically beside himself with excitement. He was a bee-keeper, a bee-fancier, a bee-raiser. He went to bed at night thinking about bees, he got up in the morning thinking about them. Quarter, who felt he was secretly honored by being one of the very few men Pile liked and trusted, had always had the private opinion that the old bee keeper probably dreamed about bees during his sleep. Quarter, even if he was annoyed at the interrupted fishing, regarded the old man with fond tenderness.

Sitting on the box in the living

room was a box made of clear plastic. The newspaper man bent down to examine its contents.

At the sight of the bee in the box, some of his irritation went away. The insect was—*out of this world*, the words came into his mind. He was a little annoyed at the triteness of the expression, but the words did provide some kind of a description, if not of the bee, at least of the feeling in him. The insect was two inches long. It glowed with gradations of gold interspersed with rings of black. The colors seemed to be vibrating with life itself, the kind of life that some men sometimes sense, but no man really understands.

Quarter had the impression that the bee was exceedingly angry—at Pile and at him, possibly also at itself, for allowing itself to be caught in a plastic box.

The anger of the insect, helpless as it was, brought up a little touch of fear in the newspaperman. With the fear came the nebulous ghost of an idea: something he had read or heard somewhere, something about bees. He tried to recall what it was. It eluded him. But there was a threat connected with it, a danger of some kind.

"Where did you get it?"

"That's my bee trap," Pile answered. "I use it to trap wild bees. I bait it with honey. When the bee lights on the honey his weight is enough to trip a trigger, and the spring lid flies shut."

"You set it to catch a honey bee, but you caught an eagle bee instead," Quarter said. He thrust his finger toward the box to see what the bee would do. The insect roused up instantly, glared at the approaching finger. Quarter grinned. "He looks as if he'd like to bite my finger off. I—" He moved the finger closer. "Yeeee-ooooowwww!" The sound that broke

from his lips was a full-bodied scream of mortal anguish. If he had touched a hot stove, he could not have jerked his hand back faster.

HIS FIRST dazed thought was that lightning had struck his arm. He glanced hastily at it, to reassure himself that he still had an arm. Pain like a red-hot needle was gouging a groove along his nerves.

"What is it, Bill? What—what—" Pile had apparently been startled to within an inch of his wits by the sudden scream. "What happened? Are—are you hurt?"

"Your damned bee stung me!" Quarter said, massaging his arm. The pain was already diminishing markedly. It seemed more like a sudden electric shock than a sting, a jolt that comes like lightning and goes as quickly as it comes.

"But he couldn't have stung you, Bill. He's in the box."

"I don't give a damn where he is, he stung me. Do you think I scream just to exercise my vocal chords?" Quarter stared at his finger. The skin was unbroken: there was no mark, and no swelling.

"Let me see it, Bill." Pile peered at the finger through thick-lensed glasses. "But there isn't anything." He blinked fearfully up at Quarter. "Are you feeling all right, Bill? I mean—" He caught himself as if to keep from saying what he had on his mind.

The look in his eyes said the words for him. "I'm not out of my head," Quarter said vigorously. "I don't care whether you can see anything or not, that damned bee stung me."

"But Bill, it couldn't have stung you. It's inside the box. See."

Looking down, Quarter had the impression that the bee was still glaring at them. But mixed with the glare

was an expression of gloating. "I'm projecting my own thoughts on to the bee," Quarter told himself firmly. The pain in his arm was dying down to manageable proportions. "Hey, what are you doing?" Pile had thrust his finger toward the box. The bee instantly faced the approaching finger.

Pile's sudden scream was one of the most satisfying sounds that Bill Quarter had ever heard. The agitated dance the old bee-keeper did around the room also pleased the newspaper man, not because he enjoyed seeing Pile suffer, but because Pile's scream and dance were proof that the bee had stung through the plastic box. The sight relieved Quarter's fears that he had suddenly taken leave of his mind.

The old bee-keeper stared at the box as if a favored and trusted pet had suddenly bitten him. In a sense, this had happened. Pile was one of those rare people who are *simpatico* with bees, whom bees never sting. But this one had stung him. The expression on his face was one of acute bewilderment.

"It couldn't have stung you, Simon," Quarter said maliciously. "It's in the box." The look on the old man's face made him instantly sorry he had spoken. "Are you hurt?"

"NO, NO, it's all right." Pile rubbed his arm. Quarter had the impression that if the arm had been torn from his shoulder, Pile would have cheerfully insisted that everything was all right in preference to admitting that a bee had harmed him.

"I don't like your bee," Quarter said. "How'd you get him in here?"

"I just carried the trap in my hands."

"And he didn't sting you?"

"No."

"Then it must have taken me to

rouse him up to fighting pitch." Quarter was cheerful. If it was a forced cheerfulness, he would have been one of the last to admit it. He didn't like the idea of bees with electric stingers. There was something abhorrent about it, something foreign, alien, unearthy.

But at that moment the real nature of the problem had not been brought home to him. He had seen something very interesting, a bee with an electric sting possibly somewhat similar to the shocking ability of the electric eel, but he had not seen anything really astonishing or disconcerting. And there was the matter of the interrupted fishing. He turned to the door.

"Simon, it was nice of you to call me up here to look at this—" He opened the door.

BzzzzZZZZttt!

As he opened the door, something that buzzed like an angry hornet went past Quarter's head, moving into the room. He ducked.

BzzzzZZZZttt!

The second buzz went past his head.

"Bees!" Quarter yelled. As he spoke, the third bee went past his head with a sound similar to a jet supercharger warming up.

Quarter's first wild inclination was to cut and run. Shame kept him from it. Pile wasn't running. The bee-keeper was standing in the middle of the room turning his head in all direction as he tried to locate the bees he could hear but could not see.

Since Pile wasn't running, Quarter couldn't. Standing in the doorway, he stared goggle-eyed at what happened next. There were at least four bees in the room, maybe more. One circled the box on the table as if it were taking up a sentry position there. The other three bees lit on the table.

The three of them pointed their heads toward the plastic box. Their bodies formed a triangle, their heads pointing inward. Their actions indicated concerted, directed, conscious effort. Their wings buzzed.

A TINY filament of smoke—or was it steam?—puffed out from the side of the box. The smoke seemed to flow in a circle. Inside the box, the trapped bee got hastily out of the way.

The three bees outside the box needed only seconds to complete their task. Quarter, staring paralyzed and entranced, could not see an electric discharge flowing from them to the side of the box, but when they had finished, they had cut a circular hole in the plastic. The segment they had cut out fell away.

The bee trapped inside the box scrambled through the hole and launched itself into the air. The three bees outside the box spun upward in movement almost too fast for the eye to follow.

All of this happened in seconds. Quarter stood in the open door, too stunned to close it. Later, he wondered what might have happened to him if he had shut it.

Bzzzzzt! Bzzzzzt! Bzzzzzt! Bzzzzzt! Four bees went past his head. Then the fifth one came. *BzzzzZZZZtttt!* The last one circled Quarter's head like a miniature jet plane. In that angry buzz he seemed to sense the warning, "Watch out for yourself, Bud. I've got my eye on you."

That fifth and final bee, Quarter was willing to bet, was the one from the box, the one that had been trapped.

"B—B—Bill!" The old man looked panic-stricken. The delighted happy look was gone from his face. His ex-

pression indicated he had taken a mortal blow. "Bill, it left me, it went away from me."

The bee he had captured and loved, as he loved all bees, had fled from him. That was what was hurting him.

Something else was hurting Quarter, something vastly different. Fear. Plain, simple, panic-inducing, soul-destroying fear.

Quarter was as broad-minded as the owner of a weekly country newspaper ever gets to be. He tried to keep his mind open to any new fact that came along, to any theory that any man cared to express. He had absorbed the atom bomb and the flying saucers in his stride. Prior to the events of this morning, he had thought he was able to meet the devil himself, complete with horns, hoofs, and a pointed tail, and take him in his stride.

HE DISCOVERED he was mistaken. There were some things he could not take. Standing in the doorway of that neat little log house, with the bright sunshine of the early morning pouring through the door, Silver Creek rippling in the sun at the bottom of the slope, the peaks of the mountains clear in the distance, Quarter found himself covered with sweat and trembling violently as his nervous system tried to soak up the shock it had taken.

He had seen, or heard, four bees come through the door. While one took up the circling position of a sentinel, three had burned a hole in the side of a plastic trap, releasing another bee held prisoner there. How had they communicated? Some form of radio, Quarter supposed. *What am I thinking?* he furiously asked himself. They didn't communicate. They didn't burn a hole in that box. It

wasn't possible. They couldn't. . . .

His eyes came to focus on the box itself. The hole was clearly visible, the circular piece of plastic that had been cut from the box was lying on the table top.

In the few seconds it had taken for the bees to burn a hole in the box and release the prisoner, Quarter's world had turned upside down. Order had left, his established ways of thinking had been upset, the habits of a life-time had been badly disarranged.

In the back of his mind a thought was trying to come to consciousness. It was the nebulous ghost of an idea which had something to do with bees. He tried to place it, but it faded out before he could contact it.

"We'll have to find them," Pile was saying. His eyes were on the empty box. "They're hived up somewhere near here."

"No!" Quarter said violently.

They had an argument. Quarter lost it. Deep in his heart Quarter knew that he would help Pile hunt for those bees, if the old man insisted on it. He also knew that the bee-keeper would insist. Pile would climb Pike's Peak on his hands and knees if he thought there was a new and different kind of bee to be found on top of it.

During the next two weeks, Quarter left his newspaper to run itself while he and Pile searched what seemed to be the newspaperman to be a hundred thousand square miles of villainous mountain country. Pile thought the bees might be found in a hollow tree. They looked for hollow trees. The bee-keeper thought they might be found in a cave. They looked for caves. They found a skunk's den and an irritated black bear and several rattlesnakes, but they didn't find any bees. Pile set bee traps by the dozens.

He caught plenty of ordinary honey bees, but he didn't catch any specimens of *apis pilensis*.

All the time they were searching, Quarter prayed they would not find the bees. He kept remembering the jolt he had gotten in his arm, and he began to wonder what would happen if that blast of fire had hit his eye. Would he have gone blind?

AFTER TWO weeks, they quit looking. Quarter was very happy to forget about *apis pilensis* and to get back to his fishing. He had never seen a trout burn a hole in the side of his creel or send a jolt of electric current up his arm.

Quarter was alone when he discovered the hide-out of the bees.

He was fishing Silver Creek about a mile above Pile's place, and was moving along under an overhanging bluff when he saw a bee pass through the air above him. Automatically he followed the line of flight. The bee disappeared into a small cave barely visible under the lip of the overhanging cliff. He knew from the size that it was *apis pilensis*, Pile's bee. A smart scramble upward would be needed to reach the cave, but a moderately agile climber could make it.

Quarter made a mental resolution that he wasn't going to be the agile climber who scrambled up and stuck his head in that cave. Nor was he going to tell Pile where the cave was located. The bee-keeper would insist on going into the cave himself, if he knew where it was.

Bzzzzzztt! Like a miniature jet plane, a big bee went past his head, startling Quarter so badly he almost dropped his fly rod.

Zzzzzzzppppptttt! It went past his head again.

The swarms had sentinels out on guard.

With three bees zipping around him, Quarter beat a hasty retreat from Silver Creek. Again he had the feeling that he was about to remember something. He got into his car and drove back to town, fast. Lurking just under the surface of his mind was—fear. He didn't know whether he was afraid of the bee—or of something else. He parked his car in front of the garage beside his home and got out.

Something moved in the air above him. He caught a glimpse of it out of the corner of his eye. A bee!

It had followed him to town!

IN THE days that followed the panicky feeling grew in fever intensity. No matter where he went or what he did, he had a bee for company. Except possibly at night, and then he wasn't sure.

They were watching him as no hawk ever watched a rabbit.

One of the worst features of the whole situation was the fact that he couldn't talk to anyone about it. This was one of the things you don't tell your best friend, not unless you want him to look pityingly at you and hastily change the subject, and when you are gone quietly call a doctor. Quarter couldn't even confirm the fact that he was being shadowed by a bee, by asking someone else if he saw the insect. Half the time he wasn't sure the bee was there himself. It was so easy for a bee to hide. A big leaf was all he needed. He could light on the trunk of a tree and keep watch without being visible.

Along about this point Quarter began to wonder if a bee was actually shadowing him, or was he hallucinating?

The thought scared him out of a week's growth.

He was sitting at his desk trying

to decide whether or not he was crazy when the door opened. A park ranger entered. "Got a little story for you, Mr. Quarter, if you want to print it. We're having some trouble up in the park."

"Trouble?" Quarter got himself under control and became the owner and editor of a weekly country newspaper on the alert for a news item. "What kind of trouble?"

"Something is killing game," the ranger explained. "I've found four elk, a couple of bears, and I don't know how many deer."

At the words a slight chill passed through Quarter. "Wolves?" he ventured.

"Wolves wouldn't tackle a bear or a bull elk at this time of the year," the ranger answered. "Anyhow, if wolves had killed the game, the carcasses would show teeth marks. These carcasses don't show anything." The ranger was a big man, jovial and friendly, but he was worried now.

"Hm," Quarter said. "Not illegal gunners then?"

"Not a chance. The game is just dying, so far as I can tell. There are no marks of any kind. It looks like poison, but there isn't any bloating, which rules out several common poisons."

"Where's all this happening?"

"Mostly in the Silver Creek neighborhood." The ranger laughed. "I talked to old Simon Pile about it and he said the bees are doing it. What's the matter, Mr. Quarter? You sick or something?"

"Just a sudden chill," the newspaperman answered hastily. "No, no, I'm all right. Thanks a lot for the item. Maybe I'll make a story out of it."

AFTER THE ranger had left, Quarter continued sitting at his

desk. The chill passed, leaving sweat behind it. Bees killing animals. Quarter knew from experience how hard it is to kill a bull elk. Unless a bullet hits a vital spot, a bull elk will carry away half his weight in lead.

Bees killing animals. What if they were just practicing on animals before they got ready to start on human beings?

Again the chill came up in Quarter, rising from the deep marrow of his bones.

Then the thought that had been trying to reach his consciousness for days popped full-blown into his mind.

In the deep depths of his soul he wished he had never remembered it.

By itself, it was a simple thing, an article he had read about the so-called flying saucers. The writer had speculated that the saucers had originated on Mars and that they were manned by intelligent creatures engaged in inspecting Earth for purposes of their own. From the speed with which the disks traveled, and the sharpness of their turns, the writer had guessed that they must be manned by insects. Certainly no creature at all like a human being could stand the acceleration, the g's, created by the turns at terrific speeds. The writer had further speculated that the insects might be super bees.

The chill that came surging up from the depths of Quarter's soul as he remembered this article he had read was like nothing he had ever experienced before.

Suppose this fantastic speculation turned out to be true! Suppose super bees had actually landed on Earth and had begun to create their own civilization here!

Suppose Simon Pile had trapped one of them.

Back into Quarter's mind came the mental picture of the plastic bee trap,

with the round hole neatly burned in one side of it.

Thoughts poured through his mind. *The human animal does not have too strong a foothold on this planet. We regard ourselves as lords of creation, masters of the universe, the end product for which all creation has aimed, the intended children of destiny. We think that Earth and heaven came into existence to provide a proper stage for our entry on the scene. No doubt the dinosaur, if it thought at all, thought the same thing. It is not necessarily true that we are the end-product of creation!*

The truth may be that even as a race we have only a thin and precarious foothold on existence, that all we have made for ourselves is a beachhead in the cosmos, that the forces arrayed against us may sweep us from this beachhead at any moment. The whole human race may be an accidental intruder into the scheme of creation, a by-product instead of an end-product, an accidental configuration resulting from the loose-jointedness in nature that goes under the name of Planck's constant h . It may be that we have slipped through this loose-jointedness in nature and have spread ourselves upon a stage that was never intended for us, that when our presence on this stage is detected by the rightful actor who properly is to perform here, we may be swept back into the oblivion from which we have daringly crept, while the real heir of creation, the creature for whom all the vast process of nature has moved, goes on to his destiny.

THE THOUGHTS boiling through William Quarter were not pleasant. They were fearful things, products of chaos and old night. They boiled through him at fever speed,

tearing and twisting and gnawing at his vitals.

Maybe the real heir is here now, Quarter thought, *waiting in the wings to put in his appearance on the stage. During the time of the dinosaurs a small furry creature squeaked in the rushes at the edges of the swamps where the dinosaurs ruled as lords of creation—a small shrew. The dinosaurs were swept from the stage and that small shrew, geological ages later, became man.*

Where is the shrew squeaking, at the edges of the marshes ruled by the human race?

Is he, perhaps, an insect?

Is he, perhaps, a multicolored bee who has salvaged the secret of space flight and is now building up his resources, establishing his strange cities here on earth, staying out of sight among the forests and the mountains until he has become strong enough to emerge from hiding and sweep out of existence these distasteful human creatures who have been masquerading as lords of creation in the absence of the rightful heir?

The super bees, which had been a personal matter concerning only Quarter and Pile, suddenly, in the feverish mind of William Quarter, became a matter which might concern the entire race.

Rising from his desk, Quarter headed for the nearest saloon, where he had three fast drinks. They helped a little, but not enough. His thoughts were still running at fever pace when he went home. His wife, sniffing his breath, gave him the silent treatment. He went into the bedroom and lay down. There was one crumb of effort in being in the bedroom: the super bee that was watching him couldn't get in here.

There was another crumb of comfort in the fact that although animals

had died, no human death had been reported.

Maybe the bees couldn't kill humans!

Quarter felt a lot better when that idea came to him. When he got up from the bed, he was almost happy.

Something about a pane of glass in the window caught his eye. Examining it, he saw what it was.

He had to sit back down on the bed, so great was the shock.

There was a hole in the glass exactly the same as the hole he had seen burned in the side of the bee trap.

They not only had him spotted, they had burned a hole in the window so they could get at him when they wanted to.

BEFORE HE had finished dinner that evening, he had decided what he was going to try to do, what had to be done. Until night fell, he puttered around in the garage, loading the garden hose into the trunk of the car and making other preparations. Even if a bee was watching him from the peaked roof of the garage, he made no effort to conceal what he was doing. They couldn't understand everything.

He didn't drive the car out of the garage until well after dark. When he returned again, it was after midnight.

Arising very early the next morning, Quarter announced that he was going fishing. When he went outside, he searched the air above him carefully. So far as he could tell, he was not being watched. Inside the garage, he picked up a piece of lath, which he put into the seat beside him.

Old Simon was already up when Quarter stopped his car in front of the bee-keeper's place. Pile came trotting down to the car, pathetically

glad to see him.

"Bill, have you seen anything?" were his words of greeting.

"I caught just a glimpse of something up on Silver Creek the other day," Quarter answered with elaborate unconcern. "If you want to ride with me, I'm going to fish up there this morning—"

Pile was in the car before he could finish speaking.

In the morning-mist, Silver Creek was cool, but Quarter was wet with sweat before they reached the overhanging bluff. Old Simon, in spite of everything Quarter could do to stop it, bounded along like a mountain goat. Quarter, his piece of lath ready in his hand, went more slowly.

They reached the spot from which the entrance to the cave could be seen.

The air was quiet. No bees were visible. Or none that Quarter could see.

Pile was a little disappointed at that.

Quarter went forward with new eagerness. Deep down inside of him he felt like a man who has been lost in a horrible nightmare and now is beginning to reawaken. Had he dreamed all this, he wondered. Or had it actually happened?

PILE, THE big flashlight in his hand, scrambled up to the cave entrance. It was large enough to enter by stooping. As Quarter went through the opening, he heard Pile's exclamation of surprise ahead of him.

He took a look at what the rays of the flashlight revealed, and almost stopped breathing. This was the city of the super bees all right. But it was not like any hive ever seen on Earth. The whole structure had not been stuck to the ceiling with wax, the way ordinary bees attach a comb

to the top of the cave; a space had been cleared out of solid rock for it, an opening at least two square yards in size. In this opening the city had been in the process of construction.

A city was all it could be called. There were no buildings as humans use the term, there were no streets—bees use air lanes instead of streets—but there was a complex structure the like of which neither of the two men had ever seen. It looked like a huge doll house, only it didn't have little chairs and tables and pianos, cook stoves, radios and TV sets, with a doll family engaged in using this structure.

It had structures, spheres, cones, pyramidal-shaped objects, all fitted together into a complex unit designed to serve some function. What was it supposed to do? Quarter did not know, but he had the impression that it was a system designed to generate some kind of energy—what kind was the secret of the super bees. It was constructed of plastic, not wax, synthetics of a hundred different kinds. The builders of this city had been masters of chemical synthesis.

Pile was moaning and pointing at the floor.

Covering almost every bare spot, piled in heaps in places, their bodies dull now, their wings stiff and still, were hundreds of super bees, all dead.

At the sight, William Quarter finally succeeded in waking from the horrible nightmare that he had been living. Life suddenly surged up in him again, whole, complete and wonderful.

"They're dead, Bill, they're all dead," Simon Pile moaned.

"Maybe they got distemper," Quarter said gently. "You know how distemper will destroy a hive almost overnight."

Quarter had to coax Pile away.

Old Simon came reluctantly, moaning softly to himself. "They're all dead, Bill. Why did they have to die?"

He didn't seem to notice the strangeness of the city they had been building, and the thought never seemed to enter his mind that they might have been anything other than an unusually large and new type of bee.

They reached the outside air.

BzzzzZZZZttt!

All the super bees weren't dead. At least one of them was very much alive.

He came out of nowhere, like a streak of lightning. He struck like the lightning strikes—at Simon Pile.

Pile screamed, grabbed at his eyes, threw up his hands, and collapsed at Quarter's feet.

BzzzzZZZZrrrrrr!

QUARTER KNEW the bee was after him. He had thought that these bees, like the normal bees of Earth, could sting only once, but as he heard the angry sound charge toward him, he knew he had been mistaken. These bees didn't sting, they discharged some totally different kind of energy. And they could discharge it more than once.

Quarter struck with the lath he carried, directly in front of his eyes.

He heard the splat of an insect body meeting wood.

Crushed, the bee fell.

Quarter stood there crouched, ready, waiting, wondering if another bee would follow the first. He was the picture of an embattled cave man, face to face with the unknown, frightened—but standing his ground and ready to fight.

It seemed to him that an eternity passed while he waited. No sound of an angry bee came. Either there had been only one left, or if there were others, they were not attacking.

At his feet, Simon Pile moaned.

Clawing at his eyes. Simon Pile moaned as he died. He was the one man who had loved bees, and they had killed him.

Eventually Quarter picked up Pile, carried him to his car.

"Heart failure," was the doctor's diagnosis of the cause of death. When Quarter called the doctor's attention to the slightly bloodshot right eye, the symptom was passed off as a minor hemorrhage going along with the coronary failure.

Quarter knew better, but he kept his knowledge to himself. He knew definitely and surely what had killed Simon Pile. But it was not knowledge that he could hope to communicate to any man without definite proof.

DURING THE months that followed, William Quarter slowly recovered his lost poise, his badly shaken emotional balance. It isn't good to think you may be the man who has discovered the next actor in the cosmic drama that is being played here on Earth, the solar system, even the universe—discovered the creature that perhaps destiny intended to succeed after your race has gone. This kind of knowledge is not healthy for any man to carry with him. But Quarter carries it. And carries it well.

So far as he has been able to discover, no super bee has ever kept watch over him since the day he and Simon Pile discovered the dead swarm. Nor have there been any reports of dead animals in the Park.

Quarter sometimes wonders if all the bees are dead. Of course, the western country is tremendously huge, and it is possible that at many places in it such swarms are coming into existence. Maybe the human race—except for a few individuals—will never know they exist until they come down from the mountains like a plague of locusts, destroying everything before them.

But, Quarter reasons, maybe these bees from Mars—or wherever they came from—maybe they're not the creatures that destiny intended to supplant the human species. If they didn't succeed in establishing their foothold here on this planet, maybe they're not as clever as they seemed to be.

This much is certain: they were not too clever.

They didn't know the effects of cyanide gas, when pumped through a long garden hose, the nozzle of which had been silently thrust through the entrance of the cave where they had been building their city. Any gopher could have told them how that gas works. But they didn't seem to

know anything about it.

Quarter sweated blood getting the nozzle of the garden hose into the cave that night, but he got the job done.

William Quarter is a little man, unprepossessing in appearance, rather modest, quiet, intelligent. He never thinks of himself as a hero, an actor in a cosmic drama. But he's the man who killed the bees.

Maybe that means we humans are tough enough, strong enough, intelligent enough, to stick around this globe we think is ours a while longer. Maybe we're not. But one thing is certain—and William Quarter is living witness to it—we are not going to leave this globe without a fight.

THE END

ONLY GENIUSES NEED APPLY

By E. Bruce Yaches

MATHEMATICS is on the verge of another "golden age". It is ripe and ready for a complete synthesis, and for the attack of some master minds, the Hilberts, Courants and Mengers of today.

Mathematics has a strange history, the examination of whose past provides an excellent clue to what the future offers. To go from primitive man's conception of number to the highly sophisticated geometry of the Greeks was a magnificent achievement. Symbolism and algebra did not come until five or six centuries later, when the glorious time of analysis began. The momentum of this drive carried mathematics well into the Seventeenth Century, after which men thought all had been discovered. Then, in the mid-Nineteenth Century, another wave of furious progress began in which mathematics was set on a rigorous and firm foundation. This drive has continued to the present day, with each decade unfolding marvel after marvel, until now the field of mathematical investigation is so rich that no man can hope to encompass more than a tiny fraction of the whole. Each is a specialist, and broad learning in mathe-

matics is a contradiction in terms.

That's where we stand today. Confusion and complexity surround us. Analysis and geometry have made fabulous gains. Strange and esoteric algebras have appeared. The calculus is a closed subject and probability is open. Nowhere does there appear any sense of unity.

And that's where the future will come in. Somewhere, some place on Earth, some genius is going to have the discerning mathematical eye necessary to bring order from this fantastic chaos. The future of mathematics is not dead; the field is not closed. What it needs is some vast, all-encompassing mind capable of synthesizing the enormous variety and complexity of utterly divergent things, linking them into a unity, so that mathematics presents just one face, instead of a thousand.

Perhaps that man hasn't been born yet. Perhaps centuries will elapse before he is, but if past experience has told us anything, it is that there are strange cycles through which the subject passes, during which brilliant minds seem to pop out, seem to grasp essentials, winnowing wheat from chaff, and combining the whole complex field into one.

BLACK ANGELS HAVE NO WINGS

By Rog Phillips

**They opened a cave closed for centuries
and released the evil trapped therein —
an evil which was but a prelude to the
horrible secret of the dread Black Angels**

THE TWO men were sitting at the bar mildly arguing over the score of a baseball game. Suddenly the one who was talking stopped. He was staring into the mirror in back of the bar, his eyes wide. He dug his elbow against the ribs of his companion. "Ja see that, Mike?" he asked.

The one called Mike looked in the mirror and cursed softly. "I wonder what he did that for?" he asked wonderingly.

They studied the reflection of the girl in the mirror and drew their own conclusions. She was young, and looked rather nice. Almost too good to be sitting in a booth in a cocktail lounge.

"The guy could be her father," Mike said. "What d'ya think, Joe,

should we butt in before she drinks that mickey finn?"

"Why not, Mike?" Joe said philosophically, rising from his stool and turning.

He made sure Mike was flanking him and in the proper mood to back his play, then advanced to the booth. Leaning both hands on the table, he sneered at the man sitting there. "What's a idear?" he shot at him enigmatically.

"Go away. You're drunk," the man frowned.

"Not too drunk to see what you just did, pasty-face. What's a idear?" He lurched out and seized the girl's wrist just as she was about to take her drink. "No-no-no-no!" he said, wagging his head.



"No-no-no-no!" Mike backed him up. "He put a mickey in it."

"Yeah, we—" Joe began. The back of the man's hand caught him in the mouth. He shook his head, slightly stunned.

Mike, an elaborate patience in every move, pulled Joe to one side. The man in the booth started to get up. Mike assisted him by clutching a generous portion of his coat and shirt and lifting. When he had him elevated the proper distance, he wound up his left fist three times for luck and let go. There was no way for the man to duck.

The blow, if it had landed squarely, would have broken his nose and blacked both his eyes. As it was, glancing against the side of his jaw, it merely rendered him unconscious. He sagged limply in Mike's grasp.

Mike looked at him with a feeling of great satisfaction, then let go. The man dropped back in his seat, seemed to settle there securely for a moment, then slumped sideways and sprawled into the aisle between the booths and the bar.

"Oh, you beasts!" the girl said. She slipped out of her seat, bent down beside her companion, and started to lift his head. She gasped suddenly, placed the back of her hand against the man's cheek.

"You've killed him!" Her voice went up the scale.

"Naw," Mike said. "Didn't hit him that hard."

The girl said, with certainty, "He's dead. He's cold."

Mike bent down. The man was ice-cold! Mike straightened up in need of a drink. Without thinking, he picked up the girl's drink and downed it in one gulp. No one noticed.

"Out of the way," the bartender said. "Let me see that guy. I gotta know whether to call the doc or the

undertaker."

In a few seconds he straightened up again. "Marge! Get on the phone and call the cops."

He saw the twenty-one girl head for the phone, then fixed his eyes sternly on Mike. Mike, in turn, was staring at the barkeep with a strange expression on his face, eyes large and round.

"You," the barkeep announced, "I'm holding for the police."

"You know," Mike said as though he hadn't heard him, "I never realized it before, but you're the nicest guy I ever knew." He reached out with both hands.

"Hey, wait a minute!" the barkeep said, backing up so forcibly he tripped against some of the crowd. "What's come over you, Mike?"

"I like you," Mike said, going after him.

The bartender turned and pushed through the crowd. He reached the end of the bar, then made a fast turn. His fist caught Mike squarely, dropping him.

THE CROWD gathered round. After a while Mike lifted his head. The police appeared. One of them called, "Where's the body?"

"Back there, offi—" a voice began, then screeched, "It's gone!"

The bartender let out an oath. "It couldn't be. I tell you, Sarge, that guy was dead as a doorknob. I know. He couldn't have got up and walked out of here. Not unless somebody swiped the— Where's the dame that was with him?"

"Here she is!" someone called.

All eyes focused on her as the cop strode purposefully to the booth where she was sitting, too frightened to move.

"All right, sister. Who was the guy? What happened to him?"

"I don't know," she said, trying

hard to keep her lip from trembling. "He—~~he~~ followed me on the street. I came in here to get away from him. He followed me in and sat down. He said he just wanted to get acquainted. He wanted to buy me a drink, and said after I drank it, if I didn't want to get acquainted, he would just sit there and let me walk out."

"Did you see him walk out?"

"No, I didn't look at anything. All I could think of was that he was dead, and the police would question me, and my aunt would kick me out of her house for being in a place like this with a man getting killed." She began to cry.

In a gentler tone the cop asked, "Did he give you his name?"

"Yes. He said it was Daar Olgno. D-a-a-r O-l-g-n-o."

"Foreigner, huh," the cop said. "What'd he look like? Dark hair, dark complexion?"

"Nah," Joe spoke up. "Hair blacker than the ace of spades, but pasty-faced. Like he was just out of stir except that his hair was long and combed back. He give me the creeps. Mike and I saw him put a mickey in the girl's drink. Mike socked him after he clipped me over the mouth."

Mike had risen and had been elaborately moving people out of his way. Now he had reached the booth where the girl sat. "My darling," he said tenderly, "I love you. I'm married, but that doesn't matter. I'll get rid of the old battle ax. I love only you. May I join you in a drink?"

Joe automatically glanced down at the girl's glass. It was empty. "Hey!" he said. "Who drank that? It had a mickey in it!"

Mike focused his eyes on the glass. "Hmm," he said, "I believe I did. But never mind, my dear, I'll order you another."

The cop looked at Mike. "Mickey?" he said. "Looks to me like it was an aphrodisiac." He took Mike by the collar. "Come along, lover boy," he said. "And as for you, girlie, scram out of here and go on home to your aunt before we find the corpus delicti." He pushed Mike toward the street door.

IT WAS the Malayan jungle, sultry, the air filled with the unmusical calls of beautifully colored birds. Two tethered elephants swayed rhythmically in the shade at the edge of the clearing around the deep pit, and in the pit Mark Grant squatted at the base of the exposed stone wall, brushing dirt carefully from the inscriptions on its face. Natives, dressed only in loincloth and sandals, filled baskets with dirt, carried them up the steep path into the jungle, and returned with empty baskets to fill them again. High in the heavens to the north a bloated orange sun glared balefully down into the pit.

Suddenly a figure emerged from the jungle. Black eyes and high cheekbones were in sharp contrast to the pith helmet, sports shirt, neatly-creased slacks, and flawlessly-shined tan oxfords. "Hey, Mark!" the newcomer called. "Pop wants you at the house. We got a newsflash from the States that you'll be interested in."

Mark looked up at the number one son of his host, and grinned. "What is it? War declared on somebody?"

"Nope. And pop is sure you'll be interested. Something about some man-made tunnels in solid rock being uncovered by a California construction gang making a superhighway. We took it on the wire recorder so you could hear it."

The lazy grin vanished. Mark looked regretfully at the strange inscriptions on the wall, inscriptions for

which he had spent years searching. He dropped the brush and went up the incline.

The commentator's voice was saying, "...The new inland superhighway being constructed in northern California broke into what may be one of the greatest archeological discoveries of the age this morning. A tunnel through solid granite at the base of Mount Shasta, heading into the base of that mountain. The tunnel is man-made, and must be older than the earliest-known Indian civilization, because they had nothing that could have built it. The highway engineers are of the opinion that it would have taken power drills and explosives. Insects of unknown species, whitely transparent, as large as an inch and a half across, and vaguely resembling crickets, have been found. Where the insects found their food and moisture hasn't been determined yet...."

"I'll have to go," Mark said. "Damn! And just when I—you'll make sure nothing bothers my find while I'm gone?" he asked his host.

"Of course. But why must you go? We thought it would merely interest you, not drag you from your work."

"You know of my origin?" Mark said. "I was born in a Tibetan temple. My mother died there from wounds she received at the hands of the brigands who killed my father. I was raised there until my uncle in the United States located me and took me home."

"That is known," his host said, nodding.

"What you did not know," Mark said, "was that that temple was built over the entrance to a tunnel like this one unearthed in California. It was the entrance to an ancient labyrinth. My playmates were the dwellers in this labyrinth, the *noro olgno*, or black

angels, guardians of the bottomless pit."

"Indeed!" his host exclaimed. "I have heard the ancient tales, but never before did I believe!"

"That much is true," Mark said. "I learned their language. They told me many things. Some of the things they told me even I can't believe."

"We are not curious unless you choose to tell us."

"THERE'S no reason why you shouldn't know. What is truth and what is fiction I have no way of knowing. Long before known history there developed what is known as the Serpent. It threatened to engulf all mankind, and so a great pit was constructed, its only entrances being labyrinths in solid rock, and the Serpent was banished to that pit. What the Serpent was is the incredible part. It was either an offshoot of the human race, coldblooded like snakes, though human in form, or it was the undead, dead yet immortal, cold and lifeless, yet able to move among men and to make them into the undead also.

"These were called the Serpent. They were taken beyond the labyrinths. The final passages into the pit were blasted closed. They would have all eternity to reopen them; but when they did they would still have to find their way through the labyrinths. They were so constructed that a person could wander forever through them without finding a way to the surface.

"To make it even more impossible, the *noro olgno* were given dominion in the labyrinths, and given the secret of a drug that would make even the Serpent go insane with fear. They were instructed to use it on anyone who stumbled accidentally into one of the tunnels, for it was certain that with the passage of time geographical

changes would uncover some of the passages."

"But why must *you* go?"

"Don't you see?" Mark said. "Here in Malaya, or anywhere else in the world except the United States, the *noro olgno* could drive away those who tried to enter. In the United States it will only make them want to enter all the more. They'll use poison gas to kill the black angels. They'll systematically explore the tunnels. I can see it now! Conducted tours through the explored passages at a dollar and a half per person. Systematic exploration by experienced crews with surveying equipment, making maps as they go deeper and deeper, until they meet the Serpent. And then that is unloosed again. I've got to stop it."

"Why not let the Masters of Tibet stop in?"

"How could they? By tomorrow a corporation will be formed, with money stepping in to build a resort hotel near the opening. In a month the public will be going there in droves. I'll have to be there. Only a white man can talk to the owners and convince them they must blast the opening shut and forget it. I might even have to buy them out. In fact, I probably will."

"My fortune is yours."

Mark grunted. "I may need it at that, though I probably have enough of my own." He groaned. "It'll take me six weeks to get to the States. I'll have to start now. Today."

"Very well, Mark Grant," his host said. "There is one thing that interests me. The *noro olgno*. You say you learned their language. They are, then, human?"

"Human, but not as we are. They are very small. The tallest is less than a fifth as tall as a man. They are very light and have long pipestem

arms. And they wear bat-like wings that their arms fit into, so they can fly—like bats."

THE THREE-story neon sign atop the building said *Cosmick Cosmetics*. The sign on the door of the private office off the ornate waiting room said *Madame Cosmick*.

Inside, behind a half-acre walnut desk, Madame Cosmick, known in private life as Joan Smith, toyed worriedly with some columns of figures. Four years ago she had graduated from Cal Tech as a biochemist. She had promptly branded herself as a biochemical physicist, and had built her talents into what had almost overnight become a cometic empire.

Two years ago she had branched out, speculating in real estate and anything that looked promising. Sometimes she had made money, sometimes she had lost money. She had heard rumors of the projected superhighway and had bought land along what was supposed to be its route. Some of it had been, some had not. She had made enough off the sales, however, to more than pay the losses on that which wasn't. And she had still owned large areas of wastelands the highway cut through, since the state bought only a hundred-yard-wide strip.

It had been on her property that the tunnel had been uncovered. She had immediately seen its potentialities. She had formed a corporation and built a resort hotel at the nearest wide spot. She had built the whole area into a vacation spot. But it had cost money, and bad luck had plagued the thing from the start. Now she was down to her last twenty thousand, and worried.

"Something could easily break me about now," she worried. The phone

rang peremptorily.

"Needles is calling," the switchboard girl announced.

A moment later a male voice spoke. "Madame Cosmick? This is George Tremont. I'm afraid there's some trouble here."

"Oh, no!" she protested. "What is it? Isn't the plumbing they put in any good? I suspected as much."

"I'm afraid it's worse than that. Much worse. There has been some kind of catastrophe. We've had to close down the caves to the public until we can get it straightened out."

"Good Lord! What is it? A cave-in?"

"Worse than that, Madame Cosmick. Bats."

"Bats?" she echoed in surprise. "Oh good lord!" She took the receiver from her ear and laughed in relief for almost a full minute. Putting the receiver back to her ear she said, "Well, disinfect the caves. Shoot poison gas in to kill them off or something."

"You don't understand," George Tremont said. "They didn't bother us until this morning. Not a sign of them. But this morning there were fifty people on the conducted tour and they were all bitten by the bats."

"All?" she asked weakly.

"All. Including the guides. They're insane."

"Insane?" she asked even more weakly.

"Insane. Something about the bites, I think. We've placed them all on the top floor and sent for doctors and nurses. The highway patrol is taking care of them at present. They have them all tied up so they won't harm themselves. They just want to run, and scream."

"I'll get there as fast as I can make it. Do what you can till I arrive."

THE ALMOST beautiful straw blonde smiled up adoringly at the self-conscious young man who held her arm. Behind them was the plane. Ahead of them was the airport bus to the resort hotel. "Call me Mrs. Eggsbrook again, darling," she whispered. "I want to get used to it. We're going to stay at a hotel tonight, you know." She shivered happily.

He buried his nose in her soft wavelets, chuckling. "Mrs. Eggsbrook!" he whispered happily.

"Ohhh!" she squealed. Then, more practically, "Come on. We've got to get a seat together on the bus." She broke away from the grip on her arm and climbed into the bus. There she paused in dismay while her husband caught up with her. He too paused helplessly.

Every seat had two occupants except for three seats, and each of these had one person in them. The nearest of those was on the right, three seats behind the driver. Its occupant was a man. His appearance was striking. His hair, combed straight back, was of the deepest black. His face was a dead white, his lips thin red lines.

He returned their shocked stare with eyes that seemed to have a magnetic power smouldering in their depths.

They hurried nervously past him to the rear of the bus where the other two empty seats were. In one there was a woman. She might have been any age from twenty to fifty. Beautiful with all the fullness of the meaning of that adjective, with hair as black as the man's up front, but as alive as his was dead.

Jerry continued to stare at her. Jennifer looked beyond her to the man sitting immediately behind her. His

shoulders were broad. He seemed in his middle thirties. He was handsome in a way that spoke of strength and courage.

She stood on tiptoe and whispered into Jerry's ear, "C-could we ask them to sit together and give us a seat to ourselves?"

Jerry shook his head. "We don't want to give away the fact that we're newlyweds. Anyway, it'll only be an hour and a half before we—"

Jennifer looked at the woman again. "All right," she said reluctantly. "You sit by the man. I'll sit by the woman."

"Okay," Jerry agreed. He added as an afterthought, "Maybe after a while we can ask if they'd mind sitting together."

JENNIFER nodded and strode down the aisle, plumping herself down beside the woman. Jerry followed and sat beside the man, giving him a friendly grin.

"My name's Jerry Eggsbrook," he said, determined to get the switch made before the bus started. "I'm in the hardware business." That sounded more important than admitting he was a clerk in a hardware store.

Jennifer took the cue, smiled sweetly at the woman beside her. "Hello," she purred. "I'm Mrs. Eggsbrook."

"Glad to know you," the man beside Jerry was saying in a firm, cultured voice. "My name is Grant. Mark Grant. I'm a . . . tourist, more or less."

"Gee! That's wonderful," Jerry said enthusiastically. "Wish I could travel all the time. My wife and I are on our honey—that is, we're on my vacation. Old married people, you know. I wanted to go to the sea shore and she wanted to go to the mountains, so here we are . . . in the mountains."

"Jerry!" Jennifer said indignantly, turning her head and giving him an indignant how-could-you look, then switching her attention back to the woman beside her, who smiled lazily and said, "I am Madame Cosmick."

"Oh," Jennifer said weakly. She smiled, adding, "Well, we can't all be . . . that is, I guess I don't know what we can't all be. It isn't true that I made my *husband* come here to the mountains for our hon—I mean *his* vacation."

There was movement at the front of the bus. The driver stood up. "Attention, folks," he said. "We've just had word that the Titans' Caverns are being closed temporarily to the public." There was a buzz of disappointment that drowned out some of his words. He repeated, "Any of you who are on the bus just to go to the Caverns might as well get off. Passengers for Titan City and the Cavern Hotel can stay on."

Reluctantly, people stood up and moved down the aisle.

"What'll we do?" Jennifer said to Jerry.

"I don't know," he muttered, doing some fast mental arithmetic concerning finances. "We have our two weeks' reservation at the hotel. We sent them some money, too. We'd better go on anyway. Maybe they'll open the Caves later."

"Uh-huh," Jennifer said uncertainly. She brightened. "Well, anyway, now we can sit together!" She jumped to her feet and took a seat that was vacant, well back in the bus.

JERRY GRINNED at Mark and mumbled, "Glad to have met you," and followed her.

During the long trip around the base of the mountain they sat close together, holding hands and trying to

look forward cheerfully to their two-week honeymoon. But gloom settled over them. They took to studying the few remaining passengers. There were only four besides Mark Grant, Madame Cosmick, and the man up forward with the black hair and dead-white face.

"I'm afraid of that man up front," Jennifer whispered to Jerry.

"Afraid of him?" Jerry said. "I just don't like him. There's something about him..."

"That's why I'm afraid of him," Jennifer said, adding lamely, "I think."

"Madame Cosmick is nice," Jerry said, brightening. "I wonder if she's a movie star?"

"I think she's a fortune teller," Jennifer said. "Mark Grant is terrific. I'll bet he's been all over the world." She glanced at Jerry shyly.

"Oh, he's okay," he said, frowning. "A wolf, though, I'll bet."

Jennifer shuddered. "That other man up there is more the wolf type," she said. "He gives me the *shudders*!" She looked wistfully at Jerry. "We are going to be very happy, aren't we, Jerry darling?"

"We sure are, Mrs. Eggsbrook," Jerry growled protectively.

Jennifer sighed happily and snuggled against him, leaning her head on his shoulder and closing her eyes.

JERRY EGGSBROOK and his wife Jennifer emerged from the elevator and headed straight for the desk. Once there they asked eagerly if the Caves were open yet.

The clerk shook his head. "No," he elaborated, "and they won't be. If that's all you're here for, you might as well leave. They aren't open. They aren't going to be open. They're closed. They're staying closed."

"But we can't," Jerry said lamely. "We only have two weeks. We can't just up and change our plans like that. We've been looking forward—"

"I know, I know," the clerk said tiredly.

"I must say," Jennifer said, "that you are most impolite. We should complain to the management."

"Go ahead," the clerk retorted, turning his back on them.

They stared at him, then slowly turned away and walked across the lobby. They became aware that there had been an eavesdropper on their conversation with the clerk. It was the black-haired man with the dead-white face.

"Don't look now," Jennifer muttered, "but clammy-eyes is looking at us."

"At you," Jerry corrected.

"He gives me the shivers," Jennifer said as they reached the revolving doors and went outside.

They stood there, staring at the truck stop across the highway, the only other building in sight. Beyond it was nothing but evergreens, and in the far distance a range of mountains.

"Oh well," Jennifer said bravely, "we have a simply wonderful room, and the mountain air is very nice. And we have each other. That's what counts most."

"We could wire the bank to send us some money out of my savings account," Jerry said doubtfully.

"No. That's for our old age."

"Our old age," Jerry said in soulful tenderness. Jennifer sighed. They moved close together.

"I beg your pardon," a voice behind them said. Automatically they turned, to see the man with the black hair and dead-white face. His lips were stretched in a wound of a smile. "I couldn't help overhearing you in-

side," he went on. "I could perhaps help you in your desire to see the Caverns. Allow me to introduce myself. I am Daar Olgno."

"Pleased to meet you," Jerry said with obvious disinterest. He started to turn away.

"I could possibly get you in to see the Caverns," Daar Olgno repeated.

"Huh?" Jerry said, while Jennifer gripped his arm. "How? Do you know someone?"

"The main entrance is closed," Olgno said. "But suppose we go across the highway and have a cup of coffee. Would you be my guests?"

JERRY LOOKED at Jennifer for guidance. She dipped her head slightly, still clinging to him.

"All right," he said.

As they crossed the highway Jennifer whispered into his ear, "I wish you hadn't accepted, Jerry."

"But I thought you nodded!" Jerry said. "Anyway, we can't back out now."

In the cafe Olgno chose the corner booth. Shortly they were served with coffee. When the waitress departed he leaned forward.

"If you really want to see the Caverns of the Titans," he said, "I know of an entrance not far from here. Approximately a mile. I am planning on making the trip. If you would care to come along..."

Jerry looked at Jennifer, determined not to say anything. She waited, and when she realized he wasn't going to commit himself she said, "I—I guess we could."

"It would be a pleasure," Olgno purred. "That's why you came here, isn't it? To see the Caverns of the Titans?"

"Are they really man-made and thousands of years old?" Jennifer asked. "How do you happen to know

of this other entrance?"

"Shhh!" Olgno cautioned. "No one around here knows about it. I discovered this other entrance many years ago, and explored several miles of the underground corridors. Yes, they're man-made. Carved from solid rock thousands of years ago. You will find them interesting."

Jerry had been watching his wife. He decided she wasn't as afraid as she had seemed to be. "When should we start, Mr. Olgno?" he asked.

"How about right after lunch?" Daar Olgno said. "Your wife should wear some walking shoes. We will be going through the woods most of the way to the entrance. That would give us time to explore a little way into the Caverns—and return before dark."

Jerry and Jennifer looked at each other. "Okay," Jerry said.

"Very well," Olgno's tone was decisive. "The thing to do is this: tell the desk clerk you are going for a walk in the woods. When you leave the hotel go south along the highway. I will join you after you have gone a way." He stood up, dropped a dollar bill on the table, and left.

"I wonder if we're doing right," Jerry said.

"Of course," Jennifer said. "Isn't that why we came here? Look Jerry, he didn't touch his coffee."

Jerry stared at the cup. It was exactly as it had been placed by the waitress. He glanced down at his own cup. "And neither have we!" he said. But he wondered why, for just a moment, it had seemed so significant that Olgno hadn't touched his coffee.

IT WAS twelve o'clock. Jerry and Jennifer paused in the doorway to the hotel restaurant. "Look!" she said. "There's Mark Grant—"

Someone brushed past them, then

stopped. It was Madame Cosmick. "Oh, hello there!" she smiled. "Won't you two join me at lunch? I'd love to have you."

"Sure!" Jerry said without thinking. "That is," he stammered, "if Jenny—"

"Why, we'd be delighted," Jennifer hurried in.

After they were seated at their table, Madame Cosmick looked from one to the other of them, smiling serenely. "So you are honeymooners. I can tell."

"How did you guess?" Jennifer asked, interested.

"It's written all over both of you. You're so much in love."

"Yes," Jennifer said, "we are." She smiled tenderly at Jerry, "I love him very much."

"That's as it should be. You've been married—how long?"

"Since yesterday," Jerry confessed.

That led into the details. Jenny worked in the drugstore, he was a clerk in the hardware and ate his lunch at the drugstore. They had planned on getting married for two whole months before they did.

The food was brought. The waiter left them again. The subject of conversation seemed exhausted.

"What do you do, Madame Cosmick?" Jennifer asked.

"Me?" Madame Cosmick laughed delightedly. "I am a biochemical physicist."

"A—a what?" Jerry said.

"A biochemical physicist. I explore the physical properties of organic substances."

"Oh," Jerry grinned. "Jenny thought you might be a fortune teller. Your name, you know."

Madame Cosmick laughed, bit into a piece of toast with flawless white teeth. "No," she said, "I do not tell fortunes. I make fortunes, perhaps. I own a company that makes various

things, including cosmetics."

"Why did you come here?"

Madame Cosmick shrugged. "For a rest, perhaps."

Jerry glanced at his wristwatch. "Oh my gosh," he said to Jenny. "We'd better hurry. He'll be waiting."

They wolfed down their lunch. Jerry reached for his wallet.

"No no," Madame Cosmick said quickly. "I invited you. Remember?"

"Well...thanks," Jerry said. A flash of inspiration hit him as he and Jenny stood up to go. "Would you have dinner with us this evening?"

"Of course! I'd be delighted! At seven then?"

MARK GRANT watched the newlyweds leave. Then, grinding out his cigarette, he went over to the table where Madame Cosmick sat alone. He smiled. "Our newlyweds are quite transparent, aren't they?"

"Aren't all newlyweds?" she countered, studying him.

"Would you like to join me over dessert?" Mark asked.

"Afraid I'm too lazy. Why don't you join me?"

Mark sat down. He offered her a cigarette. She accepted while he looked at her long, carefully manicured nails. "Your own product?" he asked.

"The nail polish?" She laughed.

"Yes." She placed an elbow on the table and rested her chin on her fist. "I've been trying to figure out what you do for a living," she said. As he started to speak, she shook her head. "No—no. Let me guess. It's more interesting. You could be something as prosaic as an engineer, nothing so unusual as a mystic. You're the type of man who, if he worked in my factory and didn't become general manager within a year, I would fire—so he could find something worthy

of his caliber. And yet, I don't believe you do anything for a living. Probably you have independent means. That raises a question in my mind. You don't seem the type who would come to a tourist hotel catering to those who want to see some Caves. Not unless it was something else. Not idle curiosity. Am I right so far?"

"So far," Mark said, "you have said nothing that wouldn't apply equally to yourself."

She frowned. "That may be so. But it does apply to you?"

Mark studiously ground out his cigarette. "You are a biochemical physicist," he said. "This morning, early, I opened a door by mistake and saw carts of food, and trained nurses. They went to the top floor. There's a door blocking the stairway up there. It was put in last night."

"Yes?" Madame Cosmick said.

"I could suggest that you are here because of that, except for one thing."

"What's that?" she asked with a hint of mockery.

"Whatever happened that caused them to shut down the Caverns didn't crystallize until yesterday afternoon. And it would be too early for them to have called in anyone. You came here on your own."

"Yes?" The faint mockery was tinged with amusement.

"Either that," Mark said, "or you have other lines besides biochemical physics."

"Such as?"

"My reading is very deficient in some fields," Mark smiled apologetically. "For example, I've never read a book on diseases communicable to man from vampire bats." He smiled. "Have you perhaps written such a book? Or perhaps a chapter in a book dealing with—" He stopped abruptly, smiling with smug satis-

faction.

"Now," Madame Cosmick said, "you really do interest me. I wonder how you knew..."

Still smiling, Mark stood up.

"Where are you going?" Madame Cosmick asked. "We haven't had our dessert."

"We can have it later," Mark said. "I wanted to satisfy myself concerning you. Now, I have to satisfy myself about someone else."

"Who?" She smiled at him archly.

"He signed himself on the register as Daar Olgno," Mark said. From her puzzled expression, he felt sure she didn't know whom he was talking about.

He hurried into the lobby. The swinging doors were still revolving. He had seen Jerry and Jennifer cross from the elevators to them. He followed.

When he reached the pavement, he saw them walking at a rapid pace to the south, away from the entrance to the Caverns.

"I WONDER why he had us meet him down the highway?" Jennifer asked. "It seems to me the natural thing would have been to meet us at the hotel."

"You don't realize the value of what he has," Jerry said. "Probably the other entrance is closed because of a cave-in. If that's so, this entrance could be worth plenty of money."

"Oh," Jennifer said vaguely. "Then why didn't he open it to the public when he discovered it?"

"You're too suspicious," Jerry said. "Don't worry. I can handle that guy."

The hotel was out of sight now. Ahead, the four-lane highway stretched into the distance. An occasional car sped by. On either side the pine trees densely bordered the

road. To the right, steeply rising, was the slope of Mount Shasta.

"Hallo!" Daar Olgno's voice came from behind them. They turned. He had stepped out from the concealment of the trees. "This way!" he called.

"Oh, hello, Mr. Olgno," Jerry called. "Come on, honey." He took Jennifer's hand.

Daar Olgno waited until they reached him, then led the way into the forest. They hurried to keep up with him.

"Don't go so fast," Jennifer complained.

"Sorry," Olgno said, slowing down a little.

Jerry studied his surroundings. They were not on a path. He wondered how the man knew where he was going. He wanted to ask him, but didn't want to show his ignorance of woodsmanship. He decided there must be some perfectly simple explanation.

They skirted the base of a steep, densely-wooded slope. They walked on a carpet of pine needles. Overhead, the pines formed a roof of cathedral-like pillars that hid the sky and the sun.

They came to a place where the steep slope became a cliff. After a short distance the cliff bulged out to form an overhang. Daar Olgno paused at the entrance to a deep gash in the face of the cliff. "We're here," he announced.

A STEEP trail led between the walls of the gash, with loose fragments of rock making the footing precarious. They had gone less than fifty feet when it turned. The split in the rock came together overhead. They reached a dead end.

"Where's the entrance?" Jerry asked.

"Right here. I covered it with loose rocks." Olgno began picking

them up and laying them down behind him. Jerry joined in.

Almost immediately the top of the opening was revealed. Excited, Jerry worked twice as hard. In ten minutes the opening was large enough for them to squirm through.

Olgno went first. Jerry followed, and guided Jennifer through. They stood on a flat floor of rock. The opening they had come through was a rough oval of light. The other way was darkness. While they stood there, catching their breath, a faint sound reached them from out of the darkness. It was a high-pitched piping.

"What was that?" Jennifer whispered. *What was that what was that*, whispered back at him from the depths of the darkness.

Daar Olgno chuckled. "You see?" he said. "Sounds echo in places such as these." He took something from his pocket. A faint glow grew from it, rapidly becoming a brilliant cone of light. "A hand generator flashlight," he explained.

It revealed walls that were perpendicular and smooth. Jerry and Jennifer gasped in surprise. The ceiling was ten feet above them, arched smoothly. Glistening white insects hopped away into the dark.

"Crickets," Olgno explained. "Harmless. Come. We'll have time to explore a mile or so before we have to turn around and come back."

He went forward. Jerry and Jennifer hesitated, but there was nothing for them to do but follow. They glanced back occasionally. The oval of light where they had come in grew smaller in the distance, until finally they could no longer see it.

The cone of light revealed an intersection ahead. They paused. Four man-made tunnels came together here.

"Do not be alarmed," Daar Olgno

said. "I'm going to let the light die down so you can experience absolute darkness for a moment."

"Gee, that'd be interesting. Wouldn't it Jenny?" Jerry said.

"Y-yes," she said uncertainly. "Hold my hand, Jerry."

The cone of light grew dim and vanished. For a second there was the glowing filament. Then it was gone.

Jerry turned his head the way they had come. "Hey!" he said. "It isn't absolutely dark. That opening we made lets in some light. It lights up the—"

Jerry felt a glancing blow against his face. There was a swishing sound. A shrill squeek. A scream of terror deafened him. Jenny! He groped for her in the darkness.

The light appeared again, growing rapidly brighter. The screaming continued in terror-stricken rhythm. Jennifer—on the floor of the cave, her arms flailing. Something rose from her and swooped off into the darkness.

Exclaiming forcefully in a strange language, Daar Olno had dropped to his knees. With one hand he ripped Jennifer's blouse from her shoulder. In the exposed flesh were two dots of bright, glistening red.

"Work the light," Olno ordered grimly, pushing it into Jerry's hand. Numbly, Jerry did as he was told.

Olno took a small tin out of his pocket and worked off the lid. With his fingers he scooped out some of the white salve and rubbed it into the two small wounds. Jennifer's screaming had degenerated into a soft whimpering.

"There, there, my dear," Olno soothed. "It will be all right now. The bite of the Black Angel can be dangerous, but not when the salve is applied in time. You'll be all right."

"Let's g-get out of here...." Jennifer whimpered. She sat up and tried to pull her torn blouse over

her exposed shoulder. She looked up at Jerry. Suddenly she burst into tears and held out her arms.

He reached down and lifted her to her feet, holding her close.

Daar Olno extracted the dying flashlight from his fingers.

MARK GRANT wasn't sure why he had decided to follow Jerry and Jennifer Eggsbrook. Certainly, there was nothing suspicious about their actions. As he followed them along the highway, keeping to the side of the road where they couldn't see him if they looked back, he decided his impulse was a combination of hunch and boredom, perhaps mostly the latter.

By the time the hotel was out of sight, he was making plans to wait until they joined whoever it was they were meeting, then skirt around ahead and "accidentally" encounter them. They might invite him to join them on their hike through the woods.

He left the protection of the trees to see if they had stopped. They were nowhere in sight. "Damn!" he muttered. "Which way did they go?"

He stood there for a moment, searching for where they had been the last time he saw them. He recalled a particular shrub. He estimated the time. In that way he narrowed down the stretch where they must have entered the woods. With his landmarks fixed, he stepped out into the open and boldly walked ahead.

He reached the fifty-yard stretch where he was sure they must have headed into the woods. He walked hurriedly along the edge of the highway, searching for a path, or at least signs of disturbed dirt. Not finding any, he crossed over to the other side and made his way back along the fifty-yard stretch. There was still no path. Not even an animal trail.

He went over the ground again,

more carefully. The shoulders of the highway were gravelled. They blended into the carpet of pine needles that stretched on under the trees. It would have taken inch by inch inspection to find where they had walked.

There was something else he might do. Perhaps away from the road there might be soft ground where they had left footprints. He went into the woods for fifty feet and paralleled the highway. Though he found places where the carpet of needles was sparse and the ground was soft enough to leave prints, he still didn't find anything.

He grew impatient. He had wasted twenty minutes. Unless they had just stopped somewhere to talk or look at something, they must now be almost a mile away.

He went back to the highway and tried to decide which way they must have gone. On the one side the ground sloped downward. On the other, in the distance, it went into the slope of Mount Shasta. In that direction might lie enough of interest to lure the hiker. At least, he decided, the probability was greater that they had gone toward the mountain.

HE WENT back into the woods, advancing toward the hills in a zig-zag course. Very shortly he made a discovery. Every fifty feet or so there was a tree with a broad scab of pitch about three feet from the ground.

He stopped at one of these and picked at it with his pocket knife. The pitch was old and hard. It could be natural, or it could be the scar of a blaze cut.

He went back to the last one, then retraced his steps to the one he had just examined. They were too much alike in size and shape to be accidental. Continuing on in a straight line about fifty feet he found another.

"That proves it," he muttered.

He went on boldly. Eventually he spied a place where the ground was soft and there were prints of shoes. It was obvious now that the Eggsbrooks and their companion were following an old blazed trail.

Why? The question disturbed him. He broke into a distance-consuming trot. He reached the place where the hill went up steeply. Gambling that the trail didn't go up, he turned to the right, and was shortly rewarded with seeing another blaze mark.

He came to the base of the cliff. He started to step out into the open. A movement off to the right made him pause and peek out cautiously. The Eggsbrooks and Daar Olgno were hurrying toward the spot where he was hidden.

He watched them. Jennifer looked as though she had fallen. As she came nearer he could see she had been crying. Her blouse was ripped. She kept lifting the torn piece over her shoulder, and it kept falling off. The rest of her clothes were coated with dust that she hadn't bothered to brush off. There was a look of fear in her eyes.

Jerry walked beside her, half turned to her and watching her with anxious concern.

"I'll take you as far as the highway," Olgno said suddenly. "Then I must come back. You must promise not to say anything about this. Do you understand? Not a word to anyone."

They hurried on. Frowning, Mark watched them disappear in the direction he had come.

He debated whether to follow them or try to find where they had been. It would be an hour before Olgno could return. He decided to go on.

He followed the base of the cliff to where it ended and was replaced by the steep slope again, and dense forest. None of the trees had blaze

marks. He had gone too far. He retraced his steps more slowly, searching the face of the cliff, and the trees that came almost to it. Here and there were deep gashes in the cliff. He followed some of these to where they ended without finding anything promising.

Eventually he gave up and started back toward the highway. He was unaware of Daar Olgno's dark brooding eyes following him thoughtfully.

When he reached the hotel the sun had gone down, and it was growing dark.

ENTERING the dining room he glanced quickly around. At a table near the vacant orchestra platform he saw Madame Cosmick and the Eggsbrooks. Madame Cosmick saw him and waved for him to join them.

He took the vacant chair, and lit a cigarette. With his eyes on the flame of his lighter, he asked casually, "Where were you two all afternoon?"

"Oh, just out walking in the woods," Jennifer said. Mark saw she was frightened, and trying hard to conceal it. Her voice was a little too high and too gay.

"Where were you this afternoon, Mark?" Madame Cosmick asked.

"Could be I went for a walk in the woods too," Mark said. He was studying both Jerry and Jennifer. Jennifer was definitely frightened. Jerry seemed genuinely worried about her, as was only natural.

A bellboy suddenly materialized beside the table. "You are wanted in the lobby, Madame Cosmick," he said.

An expression of concern and worry crossed her face. She rose hastily. Giving Mark a meaningful look, she hurried away. His eyes followed her, while he wondered what she had intended to convey to him. Was

it that she wanted him to remain at the table and keep an eye on the Eggsbrooks? Or was she trying to tell him something about the seventh floor?

He became aware that Jerry was scowling at him. "I'm afraid we'll have to leave you, Mr. Grant. Jenny doesn't feel well. We had quite an experience this afternoon—"

"Jerry!" Jennifer cried out. "You—you impossible beast!" Suddenly she shoved back her chair and ran from the dining room.

Jerry stared at her in alarm. He pushed back his own chair, anachronistically muttered, "Pardon me," to Mark, and hurried after his wife.

IN THE LOBBY Jerry saw the revolving doors still moving. Jenny was nowhere in sight. She could have caught the elevator which was even now moving upward, from the way the light was moving in the number plate above the doors. What had gotten into her?

He decided to take a quick look outside before going up to the room. The doors were still revolving when he reached them. This crystalized his conviction that Jenny had gone outside.

He was terribly upset—really worried about her. In the room when they were getting dressed for dinner, she had been a trifle feverish, had cried a couple of times. It had definitely been a horrible experience, that vampire bat landing on her and biting into her shoulder. What had Daar Olgno called it? A Black Angel. Just like that was its name and he had known about them before. But of course he must have. He had been in that tunnel before.

By now Jerry was out at the edge of the highway. The huge neon signs of the hotel weren't on. From all indications they wanted to close down

and were just waiting until all the guests moved out. But the truck stop across the highway was brightly lit. Maybe Jenny was over there.

He started to cross. A car was coming. He waited, keeping his eyes on the approaching headlights. Suddenly he saw something that made him freeze in horror. It was just a brief glimpse. All he could be sure of was that the figure was a girl. She was running at the edge of the highway.

"Jennifer!" he shouted. But he couldn't see her now. The car was between them.

He ran after her, taking to the pavement for greater speed. His eyes became adjusted to the dark. He could see her, less than a hundred yards ahead. He called to her again. She was barely perceptible as a moving shape. She seemed to have heard him, and stopped. Then he heard her laugh. It was mad laughter on a shrill hysterical key. Insane, terror-stricken.

"I'm coming, darling!" he shouted.

The laughter stopped as though cut with a knife.

He seemed to see her standing, waiting for him. But when he approached the spot it was just a small tree sticking out from the edge of the woods.

A car came into sight, its headlights sweeping the darkness away from both sides of the highway. There was no sign of Jennifer. She had gone from the highway into the woods.

Calling to her continuously, he stumbled a few yards into the darkness. Branches struck at his face; tore at his trousers. He came to the sick realization that he would have to return to the hotel for a flashlight.

For a long minute he stood still, listening, trying to catch some sound that would tell him if she were near. Then, holding his arms over his face to protect it from tree branches, he

went back to the highway, and ran toward the hotel.

In the lobby he rushed to the desk. "Have you got a flashlight?" he demanded of the clerk. Even as he spoke he saw the chrome barrel of one on the counter within reach. "Thanks," he said, grabbing it.

He started back toward the revolving doors. Just as he reached them he decided someone should know. Mark Grant! He about-faced and ran to the dining room doors. He saw Mark at the table, eating, and alone. Mark saw him at the same time.

"Jenny's run away into the woods!" Jerry said. "I'm going after her."

He didn't wait to see what Mark would do. He turned and ran, through the revolving doors and down the highway.

MARK IMPULSIVELY started to rise and follow him. Quick common sense took possession of him. If Jennifer had gone running off into the woods it was for only one practical purpose, to make Jerry follow her. She wouldn't go far. She would be afraid of the dark. She might hide and wait for him, and let herself be found, in tears. There would be a touching scene as they made up. And that would be that.

He smiled and resumed his eating, his thoughts turning to the more interesting problem of what had called Madame Cosmick from the table, and what she had meant by the meaningful look she had given him.

A few moments later she appeared in the doorway. He waved to her. She came over and dropped into her chair with a sigh. Mark signalled to the waiter.

"No," she said. "I couldn't eat now. I'm too worried."

"What about?" Mark said. "Our newlyweds?"

She became aware they weren't

there. "Where'd they go?" she asked.

Mark chuckled. "It seems that Jennifer ran off into the woods to make Jerry run after her. She's probably hiding behind some clump of bushes watching for him. When he gets near enough she'll let herself be found."

"Oh, but they mustn't!" Madame Cosmick said, half rising. "That mad person is loose!"

Mark frowned. "What are you talking about?" he demanded.

She sighed and sat down. "I suppose you might as well know. On the top floor are about thirty people who were in the caverns when they were attacked by hundreds of vampire bats. They seem to have contracted some disease that makes them insane. One of them escaped by breaking a window and climbing down the fire escape. There were three, but two of them were caught."

"Good Lord!" Mark groaned. "Maybe Jerry's following that one. I didn't think Jennifer would brave the darkness. She's probably up in their room waiting for him to come up to apologize to him."

"We'd better go after him," Madame Cosmick said. "Those people are dangerous."

"I know," Mark said. "And poor Jerry's out there in the woods looking for her right now. I'll go after him."

"I'll go with you," she said.

Mark quickly extracted a bill from his wallet and dropped it beside his plate.

"You didn't seem surprised about the patients upstairs," Madame Cosmick said as they made their way to the lobby.

"No," he said, smiling wryly. "I'd already figured that part out."

"Even to what was wrong with them? The madness?"

"I've seen that before," he said. "It'll leave them after a while."

They were in the lobby now.

"I'd better call their room and see if Jennifer's there," Mark said.

He went to a booth. Madame Cosmick stood outside while he listened to the phone ringing in Eggsbrook's room. No one answered. He finally gave up. "Maybe Jerry's right," he said. "Maybe it was her he saw."

"Or maybe she's in her room and won't answer the phone," Madame Cosmick said. "She might think it was Jerry. I think I'll go up and find out. You go after him."

The desk clerk had been watching them. "Were you trying to get Mrs. Eggsbrook?" he called to them. "She's not in her room. She went out, with Mr. Olgno."

WHEN DAAR Olgno had stopped pumping at his hand-generator flashlight in the tunnel, Jennifer had crept closer to Jerry, feeling miserable and afraid. She felt a nameless fear of Olgno. She hadn't wanted to come with him. She didn't like his interest in Jerry and herself, and had kept trying to figure out some reason for it. She wasn't naive enough to think it might be attraction to her. Or perhaps too naive in another way even to think of it.

She had *felt* something swishing through the air toward her. When it struck, it gripped her with sharp claws. There was a sound. Horrible and indescribable, yet not louder than a faint whisper. Then there was the sharp stab of pain in her shoulder.

The next instant the light was going on again. The thing attached to her blinked its small beads of eyes. It crouched as though to spring. She had one fleeting look at its face. Then it swooped upward and was gone.

But something was happening inside her. There was a strange odor in her nostrils, a strange taste in her mouth. And more. There was a fear

and, experiencing it, she knew that she had never really experienced fear before.

Olgno was rubbing the salve into the twin wounds in her shoulder, but she wasn't aware of that. The fear held her in a paralysis that was complete except for her heart. She knew that in a moment she would leap up and run. It didn't matter where. She would run and run forever and forever, because it was the only thing that could make her tolerate the fear, even for an instant.

But then something else began to make itself felt. The fear was still there, but something had allied itself with it, changed it. It was no longer fear.

Then both the new emotion and the fear were gone. She still hadn't tagged that other emotion. She tried to call it back, but it wouldn't revive.

As they made their way back to the tunnel opening and out into the security of open places, she again became conscious of still a third emotion. Uncertainty. It flavored her every thought. She caught herself being uncertain that she loved Jerry. That was absurd. But she found herself being uncertain that she was afraid of Olgno.

By the time they reached the highway and Olgno said he would leave them and return to close the entrance to the cave, she was being uncertain about having married Jerry.

One part of her knew this was insane and abnormal, and wondered at it. What caused it? What caused those other abnormal emotions?

One part of her mind told her this was madness, and made her kiss her husband. And on their way down to the dining room she was conscious of the thoughtful, suspicious glances he gave her. Those glances made her uneasy.

And suddenly she thought she saw

Jerry as he really was. An impossible, stupid, dumb hardware clerk, capable only of wrapping water faucets and ringing up sales on a cash register. She had rushed out of the dining room with a vague recollection of having said something appropriate to her feelings. The elevator doors were just starting to close. She called, and ran across the lobby into the elevator,

Upstairs, with trembling fingers, she began to pack. She was going home. She and Jerry were through. Mr. Sanders in the drugstore would be more than glad to have her back at the soda fountain. The marriage could be annulled.

She became aware that she was in the center of the room, swaying dizzily. Her travel bags blurred when she tried to focus on them. Her thoughts seemed to flow sluggishly. She swayed.

The spell passed. She started toward the bed to continue her packing—and paused in uncertainty. Would she regret it? It would be awful if she really loved Jerry and didn't realize it until after the divorce. But it would be even worse if she stayed with him and eventually realized she didn't love him.

Or did she love Daar? If she could see him just once before she went down and caught the bus she could be sure. Just once. But what if he didn't love her? It would be awful to love a man who didn't return the feeling.

A knock at the door exploded into her thoughts. With a gasp she stared at the door. The conviction grew in her that Daar Olgno stood on the other side. She knew it. It was Fate. It was the way it happened in books.

She went toward the door, slowly, her eyes on the panel, feeling that some strange sense in her mind could see through, and see Daar's sensitive, kind features as he waited for her to

open the door.

She wanted to call out and ask who it was, but even more she wanted to just open the door and see him standing there. So she opened the door, and Daar Olgno was standing there.

She was unaware of the analytical, clinical inspection he gave her, the imperceptible light of satisfaction in his eyes. All she was aware of as she retreated slowly into the room was that he was there, as in a dream of happiness.

"You are ready to go with me, my darling?" he said, his voice soft and rich and deep.

"Yes," Jennifer said. "Oh, yes!"

And there was no part of her able to whisper words of caution, or to question.

Side by side they rode in the elevator down to the lobby, across it to the revolving doors. She was unaware of the sharp, wary looks Olgno darted at the dining room doors, at those in the lobby.

Outside, as they started for the nearest place where the trees approached the hotel, she placed her hand under his arm. Her eyes stared straight ahead, unseeing. In her heart, her very soul, there was an ineffable, perfect Peace.

WHEN THE desk clerk said that Mrs. Eggsbrook wasn't in her room but had gone out with Mr. Olgno, Madame Cosmick turned to Mark Grant.

"How long ago did they go out?" Mark asked the clerk.

The man smirked. "Less than five minutes ago."

"Less than five minutes," Mark said. "I should have time to reach it before they do."

"Reach what?" Madame Cosmick asked.

Mark glanced at the wiggling ears of the clerk and took her by the arm, steering her across the lobby until they were out of earshot.

"There's going to be some trouble," he said so softly that only she could hear him. "There isn't time to tell you everything. Not even to start. I'll just tell you this much. Daar Olgno is taking Jennifer with him to another entrance to the Caves, and they *aren't coming back*. That's why I've got to get to that entrance first, and stop him."

"Are you insane?" Madame Cosmick exclaimed. "Good Lord! What is there in those Caves? Nothing but poisonous bats and—and—" She had remembered that the reports were that the tunnels were man-made. She looked at him again, saw that he was serious. "I'm going with you," she said.

"No," Mark said. "I could be killed—or worse. Someone has to stay behind to see that both entrances to the labyrinth are permanently sealed up."

"No." She shook her head, her eyes dancing with excitement. "The first opportunity I've had to live dangerously in years, and I won't remain behind to be errand boy. Come on. Let's go. And you can call me Joan."

"Okay, Joan," Mark said, with a mixture of grimness and admiration. "But you're going to have to keep up with me. We've got to get there first, and they have ten or fifteen minutes' head start on us."

THEY PUSHED through the revolving doors and started down the side of the highway. They had gone scarcely a hundred yards when a running figure loomed out of the darkness. Mark, without knowing who it was, seized the man and brought him

to a stop. Then he saw it was Jerry.

"Mr. Grant!" Jerry said in recognition. "I found her, but it isn't Jenny. She's crazy. I don't know who she is. I couldn't hold her. She got away. But it isn't Jenny."

"We know," Mark said. "We can't take time to do anything about her. Daar Olgno's got your wife. We have to catch them before they reach that other entrance."

"Daar Olgno's...got...my wife?" Jerry said, trying to grasp the meaning of the words.

"Snap out of it!" Mark said sharply. "Let's get going. Can you remember where that entrance is?"

"Daar Olgno's got my wife!" Jerry screeched. "Where is he? Let me just get my hands on that cold-blooded snake! The entrance? God! I don't know how to get there. He just led us through the woods, and there wasn't any path."

"There's a path if you know how to look for it," Mark said. "I know the way to the base of the cliff. Can you find the entrance when we get there?"

"I'm sure I can find it from there," Jerry said.

They began walking rapidly down the highway. Jerry's breathing settled down to normal.

"What happened this afternoon?" Mark asked.

"It was pretty horrible for Jenny," Jerry said. "Olgno took us to this other entrance only he knew about. He discovered it a long time ago. We went inside. It was a man-made tunnel all right. We went along it maybe a hundred yards. We came to where another tunnel intersected it. Daar let his hand-operated flashlight die down. Then this bat came out of the darkness and bit Jenny on the shoulder."

"Good Heavens!" Madame Cos-

mick exclaimed. "Then she—"

"Then what happened?" Mark interrupted her.

"Olgno got his flashlight working again. He gave it to me, and rubbed the bites with some kind of salve he had with him. Then he told her the bite of the Black Angel can be dangerous, but not when the salve is applied in time. But Jenny was hurt, and frightened. So we turned around and came back to the hotel."

"He called the bat a Black Angel?" Mark asked. "Did you get to see what it looked like?"

"Not very well. When it came it was dark. Olgno got his flash going. I could just begin to see it, on Jenny, when it spread its wings and leaped into the air and flew away down the tunnel."

"But I can't understand it!" Madame Cosmick said. "The bite of those bats drove all the others insane in a matter of minutes. Could Mr. Olgno know enough about them to know of a salve that could counteract whatever causes the madness?"

Mark sighed. "There are many things occidental medicine doesn't know about." He took a hand generator flashlight out of his pocket and worked it until light shone against the trees at the side of the highway. "This is where the path begins," he said. He directed the beam at a tree. "See that scab of pitch? That's an old blaze mark, made years ago. I'm going to keep my flash working. We've got to get ahead as fast as we can. If they see us or hear us we can't help it. We've got to get to that opening before they do."

"OCCIDENTAL medicine?" Madame Cosmick asked. "But I don't understand. What have bats in a cave in the United States got to do

with oriental medicine?"

"Come on," Mark said. "We've got to go faster." They broke into a half trot that almost doubled their speed. "I'll tell you this much, Joan," he added. "Those people on the top floor of the hotel will recover completely in a few days. All that's wrong with them is that they are being governed by an artificially-induced emotion of intense fear."

"Then why wasn't Jenny?" Joan said between breaths.

"Because the salve added another ingredient that shifted the emotional complex," Mark said. An instant later he put his hand over the flashlight lense, plunging them into darkness. "Listen!" he whispered.

Ahead, barely visible through the trees, was the ghostly face of the cliff, partially illuminated by the crescent moon. There was no slightest breeze. At first as they listened there was no sound except the distant one of cars on the highway.

Then came the unmistakable sound of rocks being dropped on rocks. It came from ahead and to the right, but a long way off, and faint.

"He's uncovering the opening again!" Jerry said, his voice ragged with emotion. "God! What's he done to Jenny? What is he going to do to her? Why is he taking her into that cave with the bats?"

"Get hold of yourself!" Mark said sharply. "You've got to take us the rest of the way, and in seconds. Maybe already the opening is big enough and they're about to slip through. In that labyrinth we might never find them."

He had uncovered the lense. They broke into a run. Five minutes later Jerry pointed to a rough gash in the cliff.

"There!" he said.

Mark took the lead climbing the

steep path into the cleft. The sound of rocks falling on rocks had stopped. It could be because Olgno didn't want to give away his location, or because they had already entered the tunnel.

Reckless of danger, Mark plunged ahead. He reached the end of the path. His light touched and revealed the dark opening. He stopped. Madame Cosmick and Jerry Eggsbrook reached him. All three stared at the small opening, absorbing the full meaning of its silent testimony.

Daar Olgno and Jennifer had already entered the tunnel.

"But why?" Madame Cosmick asked, wonderingly. "What is there in there?"

Mark seemed not to have heard her. He was staring at that black hole, barely large enough for a person to slide through. Suddenly he shuddered.

Madame Cosmick took her eyes off him and glanced at the opening again. She gasped in fright. Two small eyes were watching them from inside. Too small and too close together to be human. They winked out. The opening was black once more.

"What is it, Mark?" she whispered, drawing close to him.

"One of the guardians, Joan," Mark said.

"Bats," Jerry said. His teeth began chattering.

"No, not bats," Mark said. He shook himself as though awakening from a dream. "Joan, you and Jerry had better go back to the hotel. I'm going after them."

"No, Mark," she said firmly. "Jerry should return to the hotel and inform them of what's happened. I'm staying with you."

"No," Mark said. "Alone I might stand a chance."

"I'm going with you, Mark," Joan

said. "Don't try to stop me. If you die, I die. But I'm going with you."

"Good God!" Jerry groaned. "What are we waiting for? Jenny's in there!" He tried to get past Mark.

"All right, we'll all go," Mark said. "Let me go in first. I want to talk to the guardian—if he can understand. This is so far from..."

He stooped down at the opening and called softly in strange syllables. There was a long moment of silence. The same type of strange syllables scudded from the interior of the cave, higher pitched.

When they stopped Mark replied, while his two companions listened in amazement and disbelief. To them it seemed impossible that any human being could utter such strange sounds. Yet, it was unmistakably a language.

MARK STRAIGHTENED and turned to them. "He says he doesn't know about them entering. He just arrived and saw our light. We are to wait while he looks into it."

"That bat said that?" Jerry exclaimed incredulously.

"He's not a bat," Mark said. "He's as human as you or I—in his own way."

"You said he was a guardian," Joan said. "Guardian of what?"

In the light from the beam, reflected from the granite walls of the cliff, Mark's lips twisted into a crooked smile. "Guardian of the Serpent's prison, you might say. Although it's not the way legends have brought it down to us. The Serpent is a race. A manlike race, perhaps even an offshoot of the human race, just as the guardians or Black Angels are." He was silent for a moment, then added, "Daar Olgno is one of them. In fact, he flaunted it, because Daar Olgno is the name of the Serpent, which is

the name of a race, not an individual. In an ancient language, it means stealer of souls."

"If you knew that, why didn't you stop him before?" Jerry asked.

"Because I didn't know. I knew what his name meant, but it could have been coincidence. It wasn't until tonight when you told me you and your wife had been here with him, and he had a salve that could fight the serum, the guardians inject, that I knew beyond any doubt. And it was too late."

"Serum?" Joan said. She laughed weakly. "I'm beginning to be utterly confused."

"Yes. Serum. The guardians make it. Here and there over the world geographical changes break open the tunnels of the labyrinths. People discover them and go in to explore. The serum was developed to drive them away. It acts on the system to create unreasoning fear that will cause the person to want to escape. Afterward they rationalize it as something evil that happened to them. They stay away. Like here, for instance. The tunnels were broken into by the highway construction crew. They were immediately commercialized. People started going in in greater numbers. It was something new to the guardians. They probably waited to see what would happen, ready to make their attack if the penetration of the labyrinth became too organized."

"I'm going in after Jenny," Jerry said desperately. "I don't believe any damn bat could talk, and it's a cinch they're afraid of light." He turned on the flashlight he had borrowed from the desk clerk, and which he had been using constantly until he joined Mark and Joan. Its light was bright for a brief moment, then degenerated into a feeble yellow glow.

"I WOULDN'T, Jerry," Mark said. "The *Noro Olgno* or Black Angel will find them. They would be angry if we penetrated their domain."

"I agree with Jerry," Joan Cosmick said. "It's too fantastic to be believable. Things that look like unusually large bats, that leave a bite like a bat's, yet which you say are really human beings, guarding still another race of human beings that look like us, but aren't. Or are they? Mr. Olgno looked enough like us to pass as one of us. He has a very pale complexion, but otherwise doesn't look different."

"I've never seen one of the Serpent before," Mark said. "So far as I know, no living person had up to now. I know the legends about them. The most authentic is the one that they are cold-blooded, like snakes and other reptiles."

"I can't believe that either," Joan said. "The human brain is too delicate a mechanism to exist in a cold-blooded creature. It wouldn't function properly much below ninety-eight degrees."

"You're talking about if one of us became cold-blooded," Mark said. "The argument can't apply to an organism that's hereditarily that way. But as I said, it's just one of the legends about them. So far as I know, the Daar Olgno have been imprisoned since before modern history." He frowned. "And I can't understand how one of them got out. That salve. Maybe that's the answer. Could it be that the Serpent has developed scientifically, so that now it's ready to break free?"

"Look!" Joan exclaimed, pointing at the opening into the tunnel.

There seemed to be light coming from it. Mark and Jerry stooped down so they could see in better.

"Jenny!" Jerry called.

Mark blinked his eyes in surprise and incredulity. Fifty feet away, and

walking toward the exit as calmly as sightseers, were Daar Olgno and Jennifer Eggsbrook. Olgno's hand generator flashlight was glowing brightly. As he looked, Olgno said something to Jennifer, who turned her head and looked at him with a bright and perfectly normal smile, then laughed.

Mark's gaze went beyond them. In the distant blackness of the tunnel he could see several pairs of glowing pinpoints, the eyes of Black Angels, watching.

Olgno and Jennifer were a few feet away from the opening now. Olgno saw them. Mark saw his eyes widen as though in surprise.

"Hello!" Olgno said good-naturedly.

Joan Cosmick's voice whispered in Mark's ear. "I think," she said, "I will ask them to put me with those on the seventh floor of the hotel. I'm sure I must be insane. None of this can be happening."

"YOU FIRST, Jennifer," Olgno was saying.

"Thank God!" Jerry breathed as he crowded past Mark to help his wife out through the small opening.

Mark stepped back, frowning in perplexity. Of course there was no reason for Olgno to have taken Jennifer with him in the first place, that would make sense. But this made even less sense.

Jennifer was out. She was being quite impersonal toward Jerry.

Olgno wormed his way through the opening and stood up, brushing his clothes off quite casually.

"Mrs. Eggsbrook recovered her courage," he explained, "and wanted to see more of the cave. Where were you, Mr. Eggsbrook? We looked for you before starting out and couldn't find you." He frowned down at the opening. "Will someone help me close this up?" he asked. He glanced sharp-

ly at Mark and Joan. "I hope you will promise not to say anything about this. This is my own entrance. I discovered it and it's on property I acquired. I own it. I want to keep it secret."

"We'll talk about that later," Mark said. "Let's get back to the hotel. Okay?"

He helped Olgno put enough rocks over the hole to conceal it. Then all five of them made their way down the steep path to the base of the cliff.

Jennifer and Jerry were well ahead, talking in low tones. Suddenly she turned and came back to the others. "I'm leaving Jerry," she said. "I want all of you to be witness, and to make him leave me alone."

"But why?" Joan exclaimed.

"Because he's the jealous type," Jennifer said, "and because I've discovered I don't love him. It was all a mistake."

"Quiet a minute!" Mark said.

In the silence the sound of rocks falling against rocks could be heard from the direction they had come.

"Something's coming out of the Cave," Jerry whispered in horror.

"Nonsense," Olgno said. "Just rocks falling from the cliff. What else could it be? Let's get on to the hotel."

"That, at least, is a sensible suggestion," Joan Cosmick said with a nervous laugh. "And don't you worry, Jerry. Jenny will be all right in a few days."

"I'm all right now," Jennifer said.

"Let's get moving," Mark suggested, going in the lead and lighting the way with his hand generator flashlight. He glanced back to see if they were following. They were coming in single file, Joan right behind him, Jennifer next, with Jerry at her heels, and Olgno last.

They reached the point where they turned away from the cliff and went

into the forest. Mark glanced back the way they had come. Was that a movement off in the darkness? For an instant he thought it was. Then he wasn't sure. Olgno's flashlight blinded him.

Abruptly Joan's eyes widened. "Look out!" she screamed.

Mark turned. A figure was rushing at him from the darkness. Instinctively he crouched. This was a man. He knew what to do. He waited until the man was almost upon him, then stepped in with a swift jab to the jaw.

HE BECAME aware that he had stopped pumping the handle of the flashlight. He worked it furiously until it was again bright. The knuckles of his free hand were still stinging from the blow.

Joan was beside him, staring down at the unconscious figure. She was wrinkling her nose in horror and disgust. Mark caught the odor. It was reptilian.

He stopped quickly and touched the bare skin of the shoulder. It was not warm as would be the shoulder of any normal person. He stood up again, slowly, his senses alert, his eyes darting into the darkness through the trees.

"God!" It was Jerry. "Is that a man? He looks like he came from the tunnel!"

"He did," Mark said. "And there's more like him surrounding us." He looked around. "Where's Olgno?"

"He's gone!" Jennifer cried. "Daar!" She started to rush after him. Mark seized her wrist.

She fought to free herself. "Let me go!" she cried frantically.

"Help me, Jerry," Mark said grimly.

"With pleasure," Jerry said. He stepped in and took her wrist. When

she struggled he twisted it.

"Jerry!" she wailed. "You're hurting me!"

"I'll hurt you worse if you don't behave," he said.

Joan Cosmick was peering into the darkness. "There are several of them," she said. "What'll we do?"

"We can't let them get us," Mark said. "If they do we're done for. They'll take us into the labyrinth and close it behind them. We'll never get away."

"Let me go!" Jennifer wailed. "I love Daar!"

"Hang onto her, Jerry," Mark said. "She'll be all right when the drug wears off."

"I can handle her," Joan said. "That would leave Jerry free to help you fight them off if they close in."

Jennifer started kicking at Jerry's shins. "Ouch!" he said. Then, angrily, he slapped her sharply. She stopped kicking and began to cry. He stared at her incredulously, then turned to Mark with an unbelieving expression. "I hit her," he said softly.

"Let me have her," Joan said grimly.

With reluctance Jerry gave in and joined Mark, who was jerking his flashlight in random directions, trying to catch a glimpse of anyone who might try to attack.

"What we've got to do," Mark said, "is try to get to the highway. They may not attack. And I don't think they have any weapons. I wish I had a gun."

"Lead on, MacDuff," Joan Cosmick said grimly. "Jennifer and I will be right behind you."

"Why don't they rush us?" Jerry asked. "They outnumber us."

"That I don't know," Mark said. "In my experience, though, people who know nothing about using their

fists show almost a superstitious awe of those who do." He chuckled grimly. "And I did lay that one out with one blow."

"And how," Jerry agreed. "What—" He staggered, dazed. A rock had struck him.

Mark cursed under his breath, watching warily. Jerry was rubbing his shoulder gently.

TWO MORE rocks came, missing their targets by wide margins. And still there was no sign of movement in the darkness.

"Why don't they rush us?" Jerry muttered wonderingly. "It wouldn't take many of them to overwhelm us."

"Go ahead and tell them," Joan said. "Maybe they hadn't thought of it."

A scream shattered the stillness of the night. It came from ahead. It was repeated, high-pitched.

"A woman?" Mark exclaimed.

"It must be the one who escaped," Joan groaned. "They'll get her."

But suddenly through the trees the woman materialized out of the darkness, half naked, her clothes hanging in tatters. Her eyes were wild and unseeing. She was still screaming.

"Stop her, Jerry," Mark said. "I can't let the flashlight die out."

Jerry tried to seize her by the wrists. Her hands clawed out wildly, raking him across the face.

"Hit her!" Mark said, but Jerry had already done so, his roundhouse swing catching her on the side of the jaw by pure luck. Her eyes glazed, over. She dropped. "Good work," Mark commended. "Can you pick her up and carry her?"

"Oh boy," Jerry said. "I'm feeling my oats now!"

She was a small woman. He picked her up clumsily and swung her limp

form over his shoulder.

"Let's hope you can keep on feeling your oats," Mark said. "If we don't make it to the hotel and get help we'll never see daylight again. They'll take us into the caves and keep us there, if they don't kill us."

The light shone on something. It was a heavy stick. A dead branch that had fallen from a tree. Mark picked it up and weighed it thoughtfully. He looked at Joan Cosmick and grinned.

"If they charge us," he said, "I'll toss you the flashlight. You can work it. That'll give me both hands to wield this stick. We might stand a chance yet. I doubt if there's more than three or four of them, or they would have rushed us by now."

They went forward slowly, warily, ready to duck if a rock materialized from the darkness, ready to fight if they were rushed.

Mark sensed rather than saw the dark shape swoop down. He turned the beam of the flashlight directly at it. Without thought he brought the stick upward in a wild swing that caught the creature. It dropped at his feet. He raised the stick to strike again.

"Wait!" It said in the ancient tongue. "You shouldn't have struck me, Mark Grant. I have come to tell you that the way ahead is clear for a time. We have driven the Daar Olgno back. But more have joined them and are approaching. You must run for it."

"How do I know you are telling the truth?" Mark said in the same tongue. "At the tunnel opening, one of you deceived me."

"It was I, and I did not deceive you. Twice I have prevented the Daar Olgno from taking the girl through the labyrinth with him, as he has taken many before her since he found his

way out years ago. The first time was when he shut off his light in order to streak upon the man and kill him. There was no use striking the Daar Olgno. With his salve he is immune. But now you must run. Quickly."

"And what of you?" Mark said. "Your wing is broken."

"Leave me here. I can find my way to the tunnel."

"No," Mark said. "You can ride on my shoulder. We can get you fixed up and return you to the tunnel."

"No," the *Noro Olgno* said, but Mark stooped down and gently lifted it.

"**WE'VE** GOT to run for it," he told the others. "The Daar Olgno have enough reinforcements now to rush us and are coming."

He broke into a slow trot. Jerry jounced along with the unconscious woman over his shoulder. Joan Cosmick dragged Jennifer along, twisting her arm cruelly when she held back.

"I don't think I can go much farther," Jerry gasped.

"Save your breath for running," Joan shot at him. "This isn't a picnic, you know."

Abruptly, ahead of them, came a welcome sound. It was the noise of a car on the highway. They were still too far away from the highway to see its headlights.

"Only a little way farther," Mark said. "We can make it."

"Mark!" Joan screamed.

He turned to see glistening white forms rushing at her out of the darkness. Two quick steps and he shoved the flashlight into her hand, then stepped past her just in time to stop the first with a blow to the side of the head.

There were others. He felled them, and there were more to take their place.

"Run!" he shouted over his shoulder. "Get to the highway!"

It almost cost him the battle. It did cost him his stick. He brought his knee into the groin of the one that had seized it. The Daar Olgno fell back, dragging the stick with him.

He fought with his fists, realizing that defeat was near. His arms were growing sluggish.

"Run!" he shouted. "I can't hold them off forever!"

There were three of them, one dragging at his waist, another clinging to his left arm, the third trying to get his hands around his throat.

Suddenly the one at his throat screamed and staggered back, clutching at his eyes. Mark brought his knee ineffectively against the one dragging him down. He tried to push the one that held his left arm.

And abruptly that one fell back, clawing at his eyes.

Mark reached down and seized a handful of hair, pulling back the head of the one at his waist, hitting him between the eyes.

"We got them!" Joan said.

Mark waited, his chest heaving as he gulped in deep breaths; but no more attackers materialized from the darkness. Only three lay unconscious within the range of the flashlight. The others had fled.

"Oh!" Joan exclaimed, pointing. The frail body of the *Noro Olgno* lay twisted and dead near one of the unconscious Daar Olgno.

Mark stared at it dazedly, then looked around. Jennifer was slumped against the base of a tree.

"I adopted Jerry's tactics," Joan said grimly, "and came to your rescue. I didn't think I could hurt one of those beasts with my fists so I threw handfuls of pine needles at their faces."

"Let's get to the highway," Mark grunted. "We can't stand off another attack."

In another hundred yards they reached the highway. Mark was carrying Jennifer, who was beginning to show signs of reviving. Jerry still carried the woman who had escaped. Joan carried the crushed body of the *Noro Olgno*. Mark had told her to leave it, but she had been stubborn. "He deserves a decent burial," she said.

A car appeared down the highway. They stepped out to flag it down. It started to speed up as though to pass them. Then, as its headlights bathed them, it screeched to a stop.

"Good!" Mark grunted. "A station wagon." He called to the driver, "Will you take us to the hotel just ahead? We've had a little trouble."

THE STATE highway patrolmen studied the *Noro Olgno* with a mixture of awe and curiosity. It had been divested of its wings, and now its entirely human, though somewhat monkey-like shape, was obvious. It was just under a foot in height, its body covered with a thin coat of fur.

"You say this isn't the thing that attacked you?" their captain asked. "What are the others like, the ones that did?"

"So much like us they can pass for us," Mark said. "They're an offshoot of the human race that lost the power to maintain body temperature."

"Hmm. We didn't find any of them."

"Did you find where they came out?" Mark asked.

"Yes. We have men stationed there with tear gas guns if any of them show. As soon as we get reinforcements we're going in after them. They can't go too far, and we'll be able to track them."

"It would be better if you didn't," Mark said.

The captain looked at him curiously. "Why? Frankly I don't believe your story about them, in spite of this thing here on the table. It's impossible. I called Doc Summers at Needles, and he says a person will lose consciousness when his body temperature drops below eighty-two or three."

"I don't care what he says," Mark said. "He's talking about normal people, not the Serpent race. You won't find them. They will have fled through the labyrinth to where they live. If you get that far you'll find too many of them to handle. Your men won't come out alive."

"What else would you suggest then?" the captain asked, a note of sarcasm in his voice.

"Dynamite both entrances back a few hundred yards so that they can never be opened again," Mark said. "Do that—and forget about the whole thing."

"Nothing doing," the captain said. "This man, Daar Olgno, is wanted for kidnapping Mrs. Eggsbrook and doping her. We're going after him and his confederates. And don't try to hand me that story again. They're just people. They'll be caught and tried by law."

"Have it your way," Mark said. He frowned down at the remains of the *Noro Olgno*, the Black Angel. Then he turned away and left the hotel office.

In the lobby he saw Joan Cosmick in one of the modern relaxing chairs, her eyes closed. He went up and stood beside her looking down at her. Sensing his presence, she opened her eyes and smiled up at him.

"Feel okay?"

"Fine," she said.

"You did all right last night," Mark said gruffly. "I—I was sur-

prised." He bit his lip after the words were out.

HER LAUGH was soft and full of humor. "Surprised that the female of the species could be as deadly as the male—in her own way?" she taunted.

"Not exactly that," Mark said. "I was just surprised. That's all. I hadn't expected it of you."

"The troopers are taking things in hand?" Joan changed the subject.

Mark made a wry face. "Yes. They're going to go in and bring the culprits to justice. They'll find they're biting off more than they can chew."

"When?" Joan asked, getting up out of the chair.

"As soon as they get some more men up here. Maybe this afternoon."

"And what would you have done?" she asked.

"Dynamite both openings for a hundred yards or more."

"Then it shall be done," Joan said simply.

"What?" Mark laughed. "You sound like I'd just said I wanted fried eggs for breakfast, and you were going to fry them."

Joan smiled inscrutibly. "Perhaps I could do that too," she said. "Mark—what are you going to do when this is all over?"

"Go back to Malaya," Mark said. "I was uncovering some ruins there that are very interesting. Inscriptions."

"I see." She turned her head and looked out the window at the distant range of mountains. "Would you tell me sometime about the *Noro Olgno*, the guardian angels that have wings, and yet don't have them? About how you were able to talk with that one, maybe?"

"Sorry." Mark scowled. "Look, Joan—" He stopped abruptly and turned away.

"Joan Smith is my name," she said. "Cosmick is just a trade name. Cosmick Cosmetics."

Mark faced her again, grinning in spite of himself. "I suspected something like that," he said.

"Let's go get some dynamite. Okay?" Joan said.

"Just like that?" Mark said.

"Just like that," Joan said. She led the way to the swinging doors. There she turned. "In what part of Malaya are you digging up ruins?" she asked.

"I—" Mark started to say.

"Hey, Mark!" Jerry's voice called from across the lobby.

He turned. Jerry, struggling with three travel bags, was emerging from the elevator. Jennifer, with dark circles under her eyes, waved at Mark and Joan, a doubtful expression on her face. "Well, well," Mark said her face.

"Well, well," Mark said cheerfully. "What's this? You aren't leaving us already, are you? Jennifer looks like she needs a rest."

"She isn't going to get it here," Jerry said. He was changed. He seemed to have more confidence in himself.

"How are you feeling, Jenny?" Joan asked.

"All right," Jennifer said wanly. "I—I want to apologize for last night.

I think I was drugged. It was horrible. The things I said to Jerry..." She started to weep quietly.

"Stop that!" Jerry said. "Get hold of yourself."

"Y-yes, Jerry darling," she sniffed.

"Jerry!" Joan said protestingly.

"Uh-uh!" Mark said. "Never interfere between man and wife."

Joan stared at him queerly, then smiled slowly.

She watched as Jerry and Jennifer struggled through the revolving doors. She watched after they had gone and the doors came to rest. Then she turned and smiled at Mark. "I think I'll go up and pack too," she said.

MARK LOOKED at her, surprised. "You aren't leaving, are you?" he asked.

"I have to some time," she said. "The effects of the bat bites are lessening on the patients upstairs now. There's nothing I can do for them. I have to get back to the office."

"But—" Mark protested, then stopped, confused.

"Oh, the dynamite?" Joan said. "I'll order it done. You see, I own this resort." She smiled. "Don't worry. I can stand the loss." She turned and went to the waiting elevator. She was smiling when the doors closed.

THE END

TRACKS TO THE FUTURE

THE PATTERN of transportation changes before our eyes. We see the steady decline of the railroads; we see the buses, the automobiles, the airplanes, bit by bit taking over the once monopolistic function of trains. But, despite this decline, even the most rabid prophet of the future would not dare to say that the railroads won't be with us for a long time to come.

True, technology is forcing the railroad industry to overhaul itself, to introduce Diesels, gas turbines and steam turbines. A stagnant industry has bestirred itself during the last two decades, and it is find-

ing that scientific research pays off. But even these facts are not the important reason why the railroads will be with us when the rockets are Moonward and Martianward bound! The reason is economics!

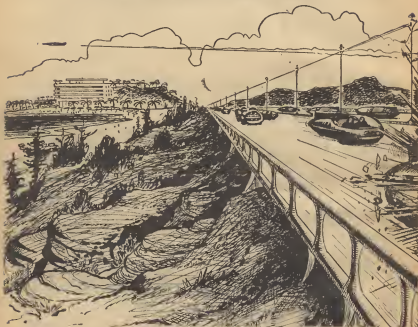
It is simply not possible to haul things in *great bulk*, things like coal, wheat, sand, ore and other solid materials, by any other means than the railroad and still do it economically, especially if the distances are great. In many places the railroads will be replaced by such ingenious devices as pipelines, trucking lines and airlines. But for great-distance haulage, trains will be with us when the first Venusian colonies are settled!

Jon Barry

FORMULA FOR GALAXY I

By Lee Gregor

**These killers were of the civilized type
who could very casually eliminate a man
— or a planet — as part of the day's work**



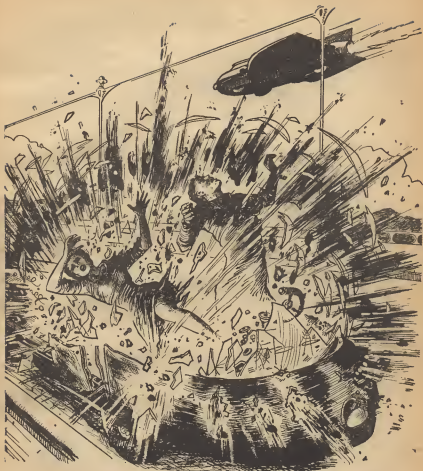
AS JACK ROMANO approached the chair, the geiger counter in his belt burst into a furious, raucous warning. Shocked, he stumbled back to a point where the buzzing stopped.

The chair, an aluminum-ribbed folder, stood where he had left it the night before, on the edge of a small cliff overlooking a valley hemmed in by iridescent crystalline spires. In

front of it was an easel, beside which stood his paint case.

The ground beneath was bare, with a sprinkling of soft green growing things in the crevices. The rocks that towered on all sides reflected the light of the distant sun in a pattern of startling colors. No animals stirred.

Romano tentatively approached his chair once more, and again the geiger



The car went up in a blaze of white fire

counter shrilled in his ears. He retreated to a safe distance, and surveyed his painting equipment with dismay. The fingers of his right hand pulled fretfully at his thick, black hair.

Abruptly he turned and walked to the air car which stood several yards behind the edge of the cliff. Snap-

ping the communicator switch, he said, "Let me have Robot Service, please."

To the metallic voice which replied, he commanded: "Get a location fix on this transmitter and send out a robot equipped with radiation measuring equipment. Immediately, please."

"Yes, sir," the robot said, and cut out.

Romano left his carrier wave on as a guide, and walked back to the point where, about twenty yards from the chair, his counter clattered mildly. He made a half circle and verified that, indeed, the radioactivity centered upon the chair or painting equipment.

This, he mused, was a curious thing. And even more deadly than curious. More on the lethal side.

HE CIRCLED again, drew a cigarette and lit it, trying to think the situation through. The preceding night he had left the chair and paints in that spot, intending to return and continue his work. On the asteroid of Doreen, with its man-made atmosphere, its artificial gravity, its automatic temperature control, there was no weather to dampen the chair, no animals to interfere, no human within fifty miles. No reason to prevent him from leaving the equipment out overnight.

This morning... Suppose he had not possessed a counter? The thought trickled chillingly through his mind. Suppose he had not been given a warning?

His fingers trembled the smallest amount as he lit another smoke, and he walked back to the air car to await the robot. He toyed with the buckle of his belt—which contained the tiny, concealed radiation detector among its silver ornamentations.

His life had been saved by the single fact that he habitually carried a detector with him. This was thought number one that that loomed in his consciousness. A radiation counter or detector of some form had been standard equipment with photographers for a number of years. In a solar system pockmarked with radioactivity left over from an interplan-

etary war, such a precaution was a necessity. Without this warning device, the famous Romano scenes of nine planets would more than once have become vague blotches of colored film.

THOUGHT number two bloomed into life. Radioactivity does not grow like a weed. It could not have appeared by itself. It might have fallen as a meteor, but examination of the area showed no signs of a fall. Furthermore, meteor showers were prevented by the same force fields which kept air on the asteroid and which maintained gravity at Earth normal.

It could not have come by itself. Therefore, it must have been brought.

His mind stopped at that point.

Above his head another air car whispered through the atmosphere. It circled once and dropped directly beside him. A tall, glistening robot detached itself with a flowing motion from its socket.

"Your instructions, sir?" it asked.

For a moment Romano hesitated, thinking how to frame his uneasiness into words.

"Go to the chair," he directed, "and measure the radioactivity there. Locate the source of radiation and hold it up so that I can see it. Then take it to the radioactivity dump."

"Yes sir," the robot said, moving off toward the chair. It paused hardly a moment as its built-in radiation-measuring instruments recorded the flux intensity at the chair. A cap at the end of a flexible member flipped open, and the directional geiger counter probed here and there, seeking the source of the radiation. In a moment, it came to rest pointing at one of the legs of the chair. The robot paused, baffled. Suddenly, with dumb inspiration, it picked up the chair and held it for Romano's inspection.

Impatiently, he shouted, "Unscrew the bottom of the leg."

The rubber plug at the bottom of the tubular metal leg screwed out, allowing a long, narrow cylinder to drop free.

Romano stared at it through binoculars, found nothing to see. The object was the size of a toothbrush box, black and featureless.

"Report on radiation," he heard the robot saying. "Gamma rays 100 roentgens per minute at a distance of one foot, plus high intensity of fast electrons and neutrons."

"Thank you," Romano said, blindly, as he stumbled into his car and had the autopilot spin him aloft.

Ten minutes on that chair and he would have been a dead duck.

AS HE CIRCLED the Hotel Doreen, preparatory to landing, he watched the other air car dash off in the direction of the radioactive waste dump, where the cylinder would be held until sufficient load was amassed for transportation to the sun itself.

He paused as he reached the terrace, his eyes scanning the thirty-odd people sitting around tables, lounging on the sand, swimming lazily in the pool. How typical, he thought, that with an entire hundred-mile-diameter asteroid for exploration, the guests at this resort chose to remain within calling distance of the pool and bar.

How many were there, he wondered, including the ones inside the hotel, in the dining room, in the game rooms, on the playing courts. Two hundred, perhaps? How many employees?

Eliminate the children and the matrons and you had left a number of hard-type characters who remained strictly in their own tight clans. Of these, perhaps half could be allocated as legitimate businessmen on legiti-

mate vacations. The remainder—the ones who sat around the game tables, or who wandered alone among the rocks gazing with impatient, hot eyes at the stars—these were the ones in temporary or permanent exile—the businessmen of dubious businesses, the entrepreneurs of shady dealings, who found the asteroid a convenient and quiet place where the police paid few visits.

ROMANO walked onto the terrace. One of these people had quietly presented him with the radioactive slug and was now waiting for him to die quietly.

Which one?

Was it the white-skinned tenth-generation Venusian in the florid green shorts, or was it the leathery-hided Martian colonist who split a bottle of Tekla with him?

What could be the connection between these total strangers and himself?

While he had spoken to many of the people in the hotel as part of the process of gathering material for his article, there was no more connection between them and himself than there was between any reporter and his public.

Christopher Chavanne had been his major contact. Chavanne, fabulous even in a solar system teeming with fabulous individuals. He sat now at a large table near the swimming pool, together with several others whose acquaintance Romano had made during the past few days. His huge bulk overflowed the minute quantity of clothing that he wore, and as he lifted a glass to his lips with a great, hairy paw, he caught sight of Romano and boomed out in his heavy, bass voice, "Romano! Back so soon from the painting?"

"Yes. I...uh...ran out of turpentine."

"Well, then. Have a seat and join us."

As he borrowed a chair from another table and fitted it in among those at Chavanne's, it took Romano's breath away to think that one of these was possibly the person who planted the radioactive slug in his chair. In the moment that it took for him to seat himself, his eyes rested briefly on each person at the table, and his mind ticked off the information that he had concerning each one.

First, Chavanne himself, the owner of the asteroid and of the hotel. And much more than that. Chavanne, the robot manufacturer and inventor who had bought up the bankrupt hotel fifteen years ago in order to give himself a pleasant place in which to do research on calculating machines. Made habitable and landscaped more than a hundred years previously by a forgotten genius, the asteroid was a spot where Chavanne could reign as absolute monarch, and where the most fashionable people in the solar system would come for their amusement.

HIS FACE broad and smiling, Chavanne held the ever-present glass in his great hand, an obese sybarite in appearance. Yet Romano knew that in another hour he would be in his laboratory, supervising the construction of his latest and most complex mechanical brain.

On the other side of Chavanne there sat Jennahagan, one of the tenth-generation Venusian settlers. Not quite as bulky as Chavanne, his flesh was of more solid muscle, and his skin had, by exposure to ultraviolet lamps, become darkened to a deep tan. Poking back in his memory, Romano dredged up the identification: Jennahagan, inventor of Jennite, the drug derived from certain well-known Venusian plants, a drug

which had been outlawed for many years. But, Romano guessed, not sufficiently outlawed to prevent Jennahagan from maintaining a very expensive residence in the Hotel Dooreen.

John Grimmenden sat beyond, small and wrinkled. A retired manufacturer of small machinery, he had attached himself to Chavanne's crowd without invitation. An unknown quantity.

Jerrold Wald, young, thin, and prominently beaked, came next. Seeing him, Romano wondered where Jerrold's uncle was. Sigmund Wald, one of the solar system's great authorities on force fields, had come to Dooreen ostensibly for a vacation. However, Romano did not think that a person with a mind as active as the scientist's would hide himself away in a frivolous vacation resort—although Romano was sure that at the rates Wald charged as a technical advisor he could afford to buy the place.

Romano had thought the uncle-nephew relationship a trifle strange. Jerrold, a real playboy type, fitted into his present surroundings perfectly. Yet, into his position as secretary to his uncle, he fitted not at all.

Again an unknown quantity, as far as his relationship to a certain slug of radioactive matter went.

Finally, sitting at Chavanne's left, was one whom Romano had seen and admired at a distance. Dressed for swimming, she filled her costume adequately. In the broad expanses between portions of clothing her skin was tanned deeply, and her dense brown, almost black hair was braided and coiled nobly about her head.

Romano shot a raised-eyebrow glance at Chavanne, who took up the cue with, "You two haven't met, have you? Dr. Helva Hansen—Jack Romano."

She took his hand firmly, and with a small shock he realized that the eyes staring squarely into his were of an amazing blue.

"Romano," she said. "Oh yes, the photographer. I remember your series on the Martian ruins. Very beautiful. But the painting...?"

"Strictly a hobby. Call me a frustrated artist, if you will."

ROMANO had maneuvered his chair next to that of Helva Hansen, so that Chavanne sat two places to the right. The robot manufacturer grinned at Romano.

"Make sure you get Dr. Hansen into one of your photographs," he said. "Improve the scenery."

"An improvement indeed. But the doctor handle. M.D., Ph.D., or what?"

She smiled broadly at him. "M.D. and Ph.D. both. Psychiatry and psychology. The entire broad expanse of the nervous system is my territory. You are now supposed to be very impressed and ask me for an analysis right away."

Flippant social small talk grated against his mood.

"Sorry, not impressed. My mother is a psychiatrist, and I discovered at an early age that psychiatrists are people. Most of them, anyway. As for an analysis, I'm afraid that my present troubles are not suited to that technique."

The psychiatrist's trained ear heard not only the words that he said, but the entire manner in which he said them, and she became aware that what he said was not frivolous banter, but something very serious.

Casually, she asked, "What sort of troubles?"

Romano said: "My major trouble at the moment is trying to get an angle for the article I'm doing on the asteroid Doreen. The place is fascinating and fabulous, but I have to

put my finger on one aspect to build around. An angle."

He paused a moment, gathering courage to make the plunge he contemplated, and choosing the proper words. In this pause, Chavanne suggested, "Why not use the robots as your angle?"

"There," he said, exhibiting mild enthusiasm, "is an idea I've been toying with. There are probably more robots per square meter on this asteroid than anywhere else in the solar system."

"Naturally." Chavanne leaned back in his chair and crossed his hands on his vast belly. "They're my babies. In other places they're still too expensive for everyone to use them as housemaids. But here is their experimental proving ground. Here I can indulge myself."

"Then they will be used more commonly in the future?"

"Of course. Robots will be built to manufacture other robots, which in turn will manufacture other robots. They will become more intelligent and organized."

"Could they become dangerous?"

Chavanne shrugged. "A robot is a machine. Machines can be dangerous if misused. You can be killed by a car walking across the street."

"But could a robot intentionally kill a man?"

"Of course not. A robot has the most limited intelligence. It will carry out short-range orders and then it will sit still until you tell it to do something else. It can't really think for itself."

"As for killing someone, there are circuits in every robot which forbid it to handle any weapon."

"But what's to prevent me from ordering a robot to fill my best enemy's sugar bowl with sugar—with a few micrograms of plutonium added for flavor? The robot doesn't know

any better, and—"

A GLASS toppled, and Jerrold Wald, his face a furious red, leaped backwards from the table to prevent his drink from landing in his lap.

Romano and his psychiatrist neighbor lifted eyebrows at each other.

Chavanne was not so easily diverted from his favorite subject. While the robot waiter mopped the table and refilled the glass, he continued, while Romano filed the incident in a corner of his mind and reminded himself to think it over some time in the future.

"The early robot inventors," Chavanne was saying, "saw a long time ago that robots might be used as tools in all sorts of crimes. They prevented this by a very simple device. A robot is not an individual. It is connected to its central office by a microwave beam. In the central office is a memory bank which records every order given to the robot, as well as the name of the person giving the order. Part of the reason for this, of course, is that the person using the robot will be charged for the services. But having the record kept centrally means that you can't hide what you have done by destroying the robot. The record can always be found in the central office."

Jennahagan, the Venusian, grunted impatiently. "Damned lack of privacy," he bellowed. "Any nosey character can find out what you've been doing by calling up Robot Service."

"Not at all," Chavanne objected. "The memory bank is confidential. It responds only to the police and to high officials. If you think that I have nothing better to do with my time than spy on my friends, you're sadly mistaken."

A train of thought tumbled madly through Romano's mind. If orders to

robots were on record, then all he had to do was ask who had sent a robot to deliver the radioactive slug, for surely nobody had carried it by hand. Could he trust Chavanne enough to ask him, or should he wait for the police? But surely Romano's unknown enemy must have known that some sort of record would be kept....

Then the significance of what Helva Hansen was saying filtered into his head and jolted him hard.

Her words were: "Is the memory bank on this rock operating yet, or are you still working on it?"

Chavanne said: "It should be operating very soon. The new system we have installed will be more efficient than the old by a large factor."

Romano heard himself say, "Do you mean to say that no record is being kept of robot orders? How long has this been going on?"

"For about ten days we have been converting the memory banks into the new experimental system. We were able to do it without interrupting robot service, but it meant that records could not be kept."

Romano's voice was hard, argumentative. "And you allowed this to be public? So that anybody could give a robot any kind of order without being caught up?"

The argumentative tone overflowed into Chavanne's voice. "I intended it to be secret, but it got out accidentally. Only the people at this table know about it—aside from the men at the shop. Why get so excited about it? No harm has been done."

"No harm's been done, eh?" Romano felt the words burn through his throat, and he suddenly found himself very angry. "But somebody ordered a robot to plant a slug of radioactive material on my painting

chair this morning. If I'd sat on that chair for ten minutes I'd be dying now, right in front of you."

THE GROUP at the table was shocked into a sudden quiet. For a long instant each stared at him. Presently eyes began to wander, and there were many sidelong, questioning glances from one person to another.

"But who?" Helva Hansen finally asked.

"That's what I'd like to know." Romano's anger began to turn back upon himself. Furious because he had spoken without caution, he began to realize that his best action now would be to protect himself by implicating everyone present.

"You can bet your boots about one thing," he declared sharply. "The slug was handled by a robot, and the robot was ordered by somebody who knew that records were not being kept. That means somebody at this table, or else one of your men, Chavanne."

Romano sat back, and found himself perspiring. He had tossed the situation into their faces. He hoped that it would not blow up in his.

Chavanne broke the silence. "How did you know it was radioactive?"

"With a geiger counter, of course."

"Since when do photographers go around wearing radiation detectors?"

"Since the last war. There's so much radioactive crud lying around loose that a photographer has to know where his films will be spoiled."

"Lucky for you."

"Damn lucky. The question is, how long will my luck hold out? This character who tried to get me—why is he after me? And, is it important enough so that he'll try again, now that he knows I got away the first time?"

"Don't be too sure," Jennahagan

roared at Romano, "that it was one of us."

"I'm not sure of anything. But I'm going to make sure that whoever it is after me won't try again."

"And how will you do that?" Chavanne asked.

This brought Romano up short. "I'd be stupid to tell," he snapped, knowing that the bluff was as transparent as air.

Chavanne's suggestion, then, turned out to be absurdly simple. "Why don't you," he said, "hire a bodyguard from Robot Service? It's a new model we have just developed. In fact, I'll let you have one free as a field test. It does everything except taste food for poison, and we might even work on that if there is enough demand."

Bursting into laughter, Romano shook helplessly for a moment. It was partly caused by the picture of a bodyguard robot standing watch against an enemy robot, and it was partly a reaction against the tension of the past hour. Chavanne's solution to his problem was so elegant that Romano felt a feeling of warmth toward the fat man.

This led to a train of thought, which in turn led into a plan for doing something more than sitting and chewing his nails.

So he said, after his laughter had subsided, "Man, what a brilliant idea! I'll go order myself a robot watchdog now." He stood up quickly and withdrew from the table.

A MOMENT'S pause at the service desk in the hotel sufficed for Romano to place his order with Robot Service. While he waited for the mechanical bodyguard to arrive, Romano visited the communications office and asked for a private, scrambled beam to Earth. While the con-

nections were being put through, he examined a large timetable and noticed with a feeling of relief that day hours prevailed in the Western Hemisphere. Then he recalled that the rotation of Doreen had originally been arranged to bring this about.

Romano locked himself into the tiny booth with the typewriter, and sat down to collect his thoughts.

Because of the time lag between the asteroid and Earth, telephone or television communication was too tedious to be practical. Teletypewriter was standard.

"Dr. Felice Romano," he typed. "Cybernetics Research Institute, Mexico City, Mexico."

"Hello, Mother. Your big boy wants some confidential information concerning a fellow psychiatrist, namely, Dr. Helva Hansen. Is she any good and can I trust her with my last penny?"

He had almost written "and trust her with my life," but had decided that this would not be discreet.

It was nice, he thought, to have a mother who knew people.

While he was waiting for the reply, his bodyguard arrived and was promptly named Fido. It was a fairly ordinary-appearing robot, slightly larger than usual, and with a bizarre red and yellow set of markings. It was a walking type, for universal mobility, as opposed to the domestic rollers.

When Fido reported to Romano, the latter acknowledged receipt by touching his identification seal to a contact on Fido's chest, transmitting a signal to the central office for the beginning of charges. Considering what the charges normally were, Romano was quite happy that Chavanne had offered to put this on the house. He hoped that the presence of Fido would do him some good.

The clattering teletypewriter in-

dicated a reply on the way.

"*Helva Hansen is a first-rate psychiatrist, I am told, and a fine person as well. She has not been known to make bad debts. Is this it?*"

IS THIS it? Mothers. Between taking photographs, writing articles, and dodging sundry assassins, he was expected to indulge in romances. He had nothing better to do.

Well, his subconscious asked him, did he?

Enough of this, he said sternly to his subconscious. There are serious things afoot.

His subconscious subsided, but not without a moment of triumph, for as Romano emerged from the communications room into the hotel lobby, Fido trailing behind him, he encountered the psychiatrist hurrying to the elevators.

"Hello," he greeted her. "The clambake has busted up?"

"Yes. There's been some bad news."

"Oh? How bad?"

"Sigmund Wald just died. He had been ill for several days." She looked him square in the face. "Radiation sickness."

Romano clamped himself steady and stood for a moment, concentrated thought screwing his face into a knot.

"Somebody tries to get me with radiation," he said in a very even tone, "and then Sigmund Wald dies of radiation. Do you mind if I connect them?"

"It's too easy to jump to conclusions. The story is that Wald blundered into the area where the ship crashed during the last war. The radioactivity there covers a large circle, perhaps ten miles in diameter."

Romano's laugh was sharp and bitter. "So Wald just happened to stumble upon the radioactive area while mountain-climbing. That's the

story they would have made about me if I'd gotten it. If my geiger counter hadn't..." He clutched at the thought which he had just scared up. "I suppose Wald wasn't wearing a radiation meter of some sort? A physicist go open around without a detector?"

Helva stopped at this, her mouth open in what Romano thought was a very charming manner.

"Suppose we look in at Wald's room," she said.

They found Chavanne there, with Jerrold Wald and Dr. Broden, the hotel physician. Sigmund Wald still lay on the bed.

ROMANO stared at the body for a long moment, his mind an ugly blur of thought, his fists clenched, his arms stiff along his sides. With a conscious effort he released his muscular tension and dragged his mind up from the depths.

Silence fidgeted for a moment. Romano explored with his eyes up and down the room. The exploration came to rest upon Jerrold Wald, who leaned against a chest of drawers, nervously playing with a wrist watch of a very elaborate sort.

Romano walked over casually. "That watch has a counter in it, hasn't it?"

"Yes. Uncle was wearing it the day he went out mountain-climbing."

Romano found it interesting that Jerrold Wald was compelled to offer this information.

"Didn't it warn him of the radioactivity?"

"No. It wasn't working."

"It wasn't working!"

"Dead as Pluto. We discovered that afterwards."

"But..." Romano paused in frustration.

"Dammit!" Romano exploded.

"How can a physicist go around with a counter that doesn't work?"

Jerrold Wald shrugged, turning the watch over and over in his hands, looking out the window, at the bed, on the floor, everywhere except into Romano's eyes.

"I didn't have anything to do with Uncle's work. Just wrote letters for him. I don't know when was the last time he used the counter. He hasn't done any experimental work for a long time. He's a consultant, you know."

With disgust twisting his mouth, Romano shook his head. The story hung together. A physicist with a counter that doesn't work, and with an urge to go mountain climbing. A radioactive area with insufficient markers, into which an unwary person could blunder and be marked with slow death.

It hung together, and yet it was wrong.

SHOULDERS hunched forward, head jutting forward, Romano paced the floor, thinking with blind fury. His black hair curled wildly over his forehead, where jewels of perspiration glittered. The roundness of his ordinarily easy-going face was distorted with the effort of his thinking. Both hands were thrust deeply into the pockets of his brown hiking pants. As he clumped back and forth in his heavy shoes, his robot bodyguard followed until he snapped at it to keep still.

He jerked at the touch on his elbow, and his upward glance caught the smile that paused for an instant on Helva's face.

"Jack," she said, "don't you think you're trying too hard?"

He caught his breath—a nervous grin untwisted his mouth. For a moment she had sounded like his mother, with the same professional psychiatric trick of making remarks that dug through the surface and rocked

you back on your heels.

"Obviously," she said, "something is biting you. Out with it."

"I'm being bit," he replied, "but I can't tell what's biting me."

"Nothing unusual. Any guesses?"

"Nope. Just because somebody tried to radiate me out of existence it doesn't mean that Sigmund Wald was knocked off in the same manner. Yet I feel that he was, and at the same time I can't tell why I feel that way. I could call it a hunch, and yet..."

"And yet you know that a hunch does not come from nowhere. Could you have observed something, somewhere, which has stuck in your mind without being noticed, but which comes up to the surface sufficiently to give what you call a hunch?"

"I could have. But what? What could I have seen?"

"Don't beat your brains out. It only makes things worse. You should know better."

"Okay." Romano sighed and slumped against the wall. "So I relax and I free-associate. Then what?"

"That's for you to say. Maybe it's something you saw in this room. This is the only place where you have seen Sigmund Wald during the past three days."

Shrugging his shoulders, hardly believing that he would find anything, Romano began to look. In outward appearance it seemed that again he paced the room aimlessly, sunk in tense thought, but now his eyes shot his sight perception into every corner, upon every object.

"Oh hell," he groaned presently. "I'm just as likely to miss the very thing I'm looking for. Uh..."

Then he had it.

"The pants," he said. "The belt buckle."

from the chair and examined the silver buckle. Jerrold Wald craned his head over their shoulders, while Chavanne and Dr. Broden looked up from their conversation, becoming aware that the course of events had been broken, that something was taking place.

"So?" asked Helva. "What about the buckle?"

Romano smiled broadly at her, his tension released. "What about the buckle?" he repeated. "I'll tell you. A belt buckle saved my life this morning. It's a wonderful little thing. A complete electronic circuit within a belt buckle. A radiation detector, in fact. It's the latest thing back on Earth. I bought mine just before I came here. Sigmund Wald must have bought his very recently also."

Helva's mind leaped at the succeeding thoughts. "Then Wald did have a detector that worked, and that means he couldn't have walked into the radioactive area without being warned."

"Right. And Sigmund Wald was murdered, just as I would have been murdered if my detector hadn't warned me."

Then there was the room with the five standing about the bed, amber light filtering through the window curtains, the silence of hard thinking and of rapid breathing.

"But, Jack." Chavanne's voice was quizzical. "If Wald had a working detector, then it would have warned him of murder just as it warned you."

Romano clutched desperately at his thoughts to prevent the entire structure of his theory from collapsing.

"Maybe they got him at a time when he wasn't wearing the belt. Maybe they used a different method entirely. The point is, he *couldn't* have gotten his dose of radiation by walking into the radioactive area.

HELVA WAS quickly at his side as he lifted the pair of trousers

That's the story we were expected to believe, and it's not so.

"Sigmund Wald was murdered by radioactivity, and somebody tried to murder me this morning. I think, Mr. Chavanne, that you had better call the police."

CHAVANNE heaved himself to his feet, chewing his lips and pulling his brows together. "I suppose it's necessary," he growled, beginning to leave the room.

"Dr. Broden," Helva asked, "are you certain that Wald died of radiation sickness?"

"I'm not a very good doctor," he said, in a low voice. "You don't develop and expand when you play being doctor at a fancy resort hotel. This was the first case of radiation poisoning I had seen in twenty years. Since I was an interne, in fact.

"So two days ago Mr. Chavanne came to me and said Sigmund Wald was sick, that he was nauseated and his gums were bleeding. He'd been walking around in the mountains and must have gotten into the radioactive area. So I looked at him, gave him a blood count, found it down to nothing and said, yes, he's suffering from radiation sickness. Shot him full of what remedies I had, but it was too late."

Dr. Broden turned away from the window and forced himself to look at the others. "Now I'm not sure of anything," he said. "I'll have to make an autopsy."

ROMANO sat with Helva Hansen at a small table on the terrace, his hand wrapped firmly around a cold glass. Fido stood stolidly behind, gazing imperturbably at the gay figures which sported in the pool and lounged on the beach.

Romano said, "Look here. Why do people get themselves murdered? Mostly for money. Sometimes because of passion, revenge, just plain

lunacy, but mostly for money. Did Sigmund Wald have any money?"

"Depends on the point of view. For a scientist he had quite a pile. To somebody like Chavanne it would look like peanuts. The point is, do you have any money?"

"Hell, no. But...oh, I see. Why should I be considered a tempting target?"

Helva looked into her glass and spoke deliberately. "I look for similarities and throw out all extraneous data. The only thing you and Sigmund Wald had in common was a habit of hiking about over the countryside. For you it was painting. But you were among the very few guests in this hotel who were to be found on the other side of this rock."

Romano's mind latched onto the idea like a steel trap.

"Then whoever tried to do us in didn't want us over there. Either we saw something we weren't supposed to see, or we were bound to come across it. This makes it clear what's to be done."

"It's clear, but is it safe?"

Romano chewed his lip. "Depends on how nutty our murderer friend is. Suppose we go out there among the mountains to find what it was we weren't supposed to see. Our Mr. X knows that if we find it, his goose is cooked for sure. Will he try to knock us off again? First, it won't be so easy with a few robot bodyguards on our side. Second, he'll give himself away for sure if we have Robot Service keep tabs on everybody leaving the hotel."

HELVA LET her eyes wander over the shimmering blue water surface. She found this a meaty problem.

"As you said, much depends upon just how psychopathic our murderer is. If he is sufficiently unbalanced, his desire to kill the ones about to

discover his secret will overbalance the more remote danger of giving himself away by making this killing.

"And from our point of view, if we get killed, it is still no cause for rejoicing if the murderer gets caught with us as the bait.

"I suggest you wait until the police arrive. This is no game for amateurs."

"We're going to smoke out our man just as safely as lying in bed. Furthermore, we're going to make Chavanne get off that big fat end of his and earn his pay."

Helva smiled maliciously. "That I'd like to see. Chavanne's idea of security is to set robot guards all over the hotel, when the man we want could be a hundred miles away. Makes the guests feel safe while at the same time experiencing a little vicarious excitement."

"One piece of excitement per lifetime is enough for me," Romano said sourly. "When it becomes fatal, that is. Let's find Chavanne."

They crossed the lawn at the rear of the hotel and entered Chavanne's laboratory. Romano called for the fat man through the interphone and the two waited impatiently in the tiny anteroom.

Dressed in his working coveralls, Chavanne appeared like a tiny, impatient blimp. "I have a calculator running," he said breathlessly. "Have to get right back. What can I do for you?"

"It occurred to us," Romano said, suppressing a frivolous compulsion to sink a pin into the blimp, "that while we are sitting around on our butts here, the clues to the murder of Sigmund Wald are to be found over on the other side of this asteroid. I suggest that you send some of your robots out on a systematic search—to look for whatever it was that Wald and myself were on the

verge of discovering."

Chavanne jerked his hands irritably. "Don't you think that's a job for the Interplanetary Police?" he asked.

"But Chavanne," Helva cajoled, "Jack is trying so hard to write a good article about your asteroid. You'll make it easier if you can help, with this. And you'll look so much better yourself. Think of the publicity."

Chavanne snorted. "I detect the fine odor of blackmail in this. If I sit back and wait for the police I'm just a dull clod who invents robots and calculating machines. If I help you solve a mystery, then I'm a great celebrity and people will hail me from all ends of the solar system."

Romano shrugged. "That's life."

Chavanne waved his hands distractedly. "All right, all right. Just don't bother me any more. Tell Robot Service to go ahead. Now, please excuse me. I must get back to the calculator."

But he was optimistic. As he turned to leave, Dr. Broden walked in, followed by a robot laden with small pieces of equipment.

"Returning your counters and things," he said, in a voice that dragged slightly with weariness.

Romano smelled antiseptic soap on the doctor's hands. His reporter's nose perked up.

"The autopsy?"

The doctor nodded. "Finished."

He paused a moment, collecting words. "We were right, and yet we weren't right. It was radiation sickness after all, but from internal causes, not external. Minute quantities of radioactive material had been taken orally. In other words, Sigmund Wald was literally poisoned. Probably with a mixture of fission products."

Romano pursed his lips to whistle, and heard Helva Hansen gasp with a quick intake of breath. Radioactive

poisons—the most devastatingly deadly materials in the universe! Poisons so incredibly potent that a millionth of a gram could be absorbed into the body, to remain in the organs, in the bone marrows, sending virulent radiations directly into sensitive tissues. No wonder Wald's counter had failed to give him warning. The amount of radioactive material used could be so tiny that it would emit no more radioactivity than an ordinary fluorescent watch dial—it would affect the counter no more than the customary cosmic ray background.

But when ingested it produced slow, certain death.

THE RADIOACTIVE material dump was a lonely, bare building, some ten miles from the hotel, surrounded by a terrain of harsh red rocks. A sign on the door said, in large red letters: **RADIOACTIVITY! KEEP OUT!** It had been locked, but now it stood open, its lock blasted to bits.

Romano did not care to enter.

"How convenient," he said to Helva Hansen, who stood by his side in front of the building. "An entire dump loaded with ashes from the asteroid's atomic power plant. Free for anybody's picking. No guard, no alarm. Enough stuff in there to kill everybody in the place."

Helva walked with him back to the air car.

"It seems irresponsible," she agreed. "Yet remember that nobody but a robot could go into that building. And the robots all report back to Robot Service central office."

"So just at this particular time the recording system is on the bum and the field is clear for anybody to have a robot commit any kind of mayhem in privacy."

Romano closed the door of the air

car and punched the starting switch. "I wonder if the robots have found anything."

"Unlikely. They've been on the lookout for only an hour. It's a difficult search when you don't even know what you are looking for and don't know how well it might be hidden."

Romano grunted. He repressed an urge to call the hotel, knowing that they were to call him if anything was found.

"Can't blame them," he said. "There are at least 25,000 square miles to be covered, and only ten Robot Service's resources."

He whirled the car aloft and circled for a moment, while a thought circled in his mind.

FINALLY he said: "I'm going to play a screwy hunch. I don't know where it comes from except that I must have a suspicion that's so wild I can't even admit it to myself."

Helva raised her hands in mock admiration.

"Well!" she exclaimed. "Your subconscious is working overtime today. Just let me know when you need help."

Romano grimaced at her and put in a call to the hotel. He wanted to know the location of the radioactive area where Sigmund Wald was supposed to have gotten burned.

Helva stared at him while he wrote down the figures.

"No, I don't intend to get myself irradiated," he reassured her. "But it strikes me that since both Wald and I were supposed to have gotten our doses at that place, then just conceivably the mysterious doings we were on the verge of witnessing might have been somewhere in that locality."

Helva nodded, dubiously. "That

could possibly be logical."

"I have nothing better."

Twice they caught flashes of light, reflections from the cars of the robots cruising in calculated circles. Doreen's landscape was gone into night, and there was only darkness below and the shimmering mesh of stars above.

"Hell," Romano grumbled. "I forgot it would be nighttime on this side."

He switched on a pair of searchlights that spread pale fingers through the darkness, raising glittering and confusing reflections from the rocks below. Still nothing could be recognized.

"We should be about there," Romano muttered, slowing the car and beginning a wide circle. Helva clutched at her seat arms, while Fido, the robot bodyguard, stood solidly braced in a corner behind them.

Romano had the air car skimming the ground, searching for the radioactive area markers, when without preamble Fido boomed out in a tremendous voice a warning that an air car approached within close range from behind and above.

Romano, responding with instantaneous reflex, swung the searchlights around to that direction and at the same time slowed his car to almost a halt, allowing it to sink towards the ground.

There was a tremendous white flare followed by a concussion that bucked and jarred the car. The roar of the explosion joined with the crunch of steel on rock into a single, ear-splitting din.

Almost simultaneously there came a blast that demolished the tail of the car, hurling Romano and Helva out of their seats and into the windshield.

Red-lined darkness settled over their minds.

ROMANO awoke feeling a soft, warm hand upon his forehead and a grinding ache behind his eyes. Cautiously testing his vision, he found the countenance of Helva Hansen filling his field of view.

"Welcome home," she said.

Romano replied with an incoherent groan, and surveyed his environment sufficiently to discover that he was flat on his back on the floor of an air car whose motion was barely perceptible. He made as though to get up, but a firm hand on his chest and the anguish in his cranium weakened his intention before he had moved far.

"Hey there," Helva's voice reached his consciousness as though from a great distance. "You've suffered quite a nasty concussion. Doctor says you stay flat on your back for the next day or so."

She fed him a drink very slowly.

After a few minutes he was able to say: "Where in all the four confounded dimensions are we going?"

Helva smiled sweetly at him. He was really recovering.

"Back to the hotel, of course. You may thank your pal Fido for getting us out of the wreck. The big lug picked us up bodily and carried us out. My sides still ache. The car was blown completely to bits."

"Old Fido's really worth his keep then?"

Romano looked gratefully at the robot and patted one of the legs of the huge bulk. "Nice work, old man. I'll buy you a can of lubricating oil when we get back."

A sensation of baffled curiosity crept into his mind. "What happened to the wreck? Where'd this fine car come from?" he demanded to know.

"Courtesy of Robot Service. Apparently when a car gets smacked, Robot Service knows when, where, and how. It wouldn't do for the ho-

tel to have its guests lost all over the asteroid."

A slight clicking in the automatic pilot, and a feeling as though the car were changing direction drew Helva's attention to the window.

"We're back already, Jack. Do you walk quietly to your bed, or will I have to carry you?"

"First I must do one thing. Then I'll do anything you say. But first one thing. We must find out who was away from the hotel in an air car at the time we were shot down. We get that dope, and we have the case tied up fast in our fat little fists."

They found, however, when they stopped at the Robot Service office, that the case had dribbled completely out of their hands.

Everybody, it seemed, had chosen that particular time to go dashing about the asteroid in his air car. Romano doggedly wrote every name down.

Jennahagan, the Venusian drug manufacturer.

John Grimmenden, the retired machine builder.

Jerrold Wald, Sigmund Wald's playboy nephew.

And Christopher Chavanne himself.

It came back to these four people then.

The same four who had sat at the table that very morning. Incredible that it had been just that morning. That same four who had known—that the memory bank in the Robot Service center was disconnected, and that orders to robots would not be recorded.

Helva Hansen entered the room, followed by a robot bearing two dinner trays.

"One for you and one for me," she said, setting her own meal out on a small table.

Romano looked at the tray which the robot set on his bed. A feeling of regret twisted his mouth.

"This is not a pleasant way for us to spend our first evening together." She touched his hand lightly.

After the robot had removed the dishes, Romano felt himself overcome with sleep. Helva sat beside him for a few minutes, then left quietly.

AFTER TEN hours' sleep, the throbbing in Romano's head had quieted to a dull ache. As he was swallowing a white tablet and debating whether to shave himself or to visit the barber, Chavanne walked into the room with a greeting of revolting heartiness.

"Sorry to hear about your...uh... accident. I hope you are well."

"Well enough. Let me have two minutes while I shave my face," he asked of Chavanne, "and I'll join you in breakfast."

"I've just had lunch," Chavanne smiled, "but another cup of coffee never hurt."

Depends on what's in it, Romano thought.

Aloud, he said, "I need your help. I want you to tell me everything you know about some of the people here."

Chavanne shrugged, cautiously. "What could I know? These people are strangers to me. They come here for a few weeks or months. I see little of them."

Romano said deliberately, "You seem to be quite friendly with Grimmenden, Jennahagan and Wald. They're the only ones I'm interested in."

"And myself also? I was out in an air car when you were shot down. I'm one of your suspects, too...eh?"

Romano smiled at him candidly. "Sure. You're a prize suspect." He wiped his face. "Shall we go to breakfast?"

They found Helva Hansen already in the dining room.

"How's the head?" she asked.

"Still where I left it last night," he replied. "I'm beginning to think it's very nice having a doctor so handy."

"Are you sure?" she replied sweetly. "Do you think you could stand being healthy all the time?"

"Sounds repulsive."

Breakfast arrived, diverting his attention for a few minutes.

PRESENTLY he said, "You know,

Chavanne, it would be very useful if one of your calculating machines could be used as a mystery solver. Put in all the clues, turn the crank, and grind out all the answers."

Chavanne smiled. "It would be very nice, if you could be certain that you have *all* the evidence. This may involve almost an infinity of items, including the entire life history of all the participants, the psychological factors involved, the motivations. It becomes very intricate.

"However, I don't think it's necessary here. I think I can tell you who your man is."

Romano exploded slightly. "What!"

Helva stiffened in her seat, was more cautious. "Are you sure?" she asked. "Or are you only guessing?"

Chavanne shook his head. "Not guessing. Deducing. Furthermore, I can tell you what it was you were not supposed to see while you were wandering among the hills."

Romano stared at Chavanne, felt himself growing hot.

"You mean to say you knew this all along, and yet you let us go out there and get shot up without telling us?"

Chavanne dropped his eyes, and his great bulk made slight squirming motions.

"The situation," he said, "is rather embarrassing for me. Say that it's

delicate."

"You see, I'm being blackmailed," he continued. "I tell this to you only because the person blackmailing me is the one who caused Wald's murder and who tried to murder you. I know you can keep my secret because catching the murderer will depend upon it. When the police come it will be all over anyway."

Chavanne leaned back in his chair and wearily massaged the spot between his eyes.

"I'll be disgraced, but at least my life will be safe."

Helva suddenly felt that she'd been here before. To her professional ear, the exaggerated dramatization was as transparent as a glass window.

"Okay," she said, dryly. "So you've been a bad boy. We'll forgive you, but what's the story?"

Chavanne lowered his eyes, his fingers playing with the coffee spoon. "For some time now a narcotics smuggling ring has been using this asteroid as a base of operations.

"At first this smuggling was kept secret even from me, and by the time I found out these men were well established and were able to make certain threats..."

"And certain offers?" Romano interjected. "How much did they pay you?"

Chavanne chuckled. "You're a smart boy. What they paid me was barely enough to make up my losses in running this hotel. As long as they didn't bother me and nobody got into trouble, I didn't mind. But now it's gotten into the killing stage and the Interplanetary Police are on their way. I'm pulling out of the deal. The question is, will they let me?"

DRUMMING with stiff fingers upon the table top, Romano thought fast and hard. "So the mys-

terious business out in the mountains that I was about to stumble on was what? Their center of operations for the smuggling game? Their cache?"

Chavanne nodded.

But... Romano quickly shuffled the card index of his mind, dealt out the four names which could be involved, and chose the only one which fit.

"It's Jennahagan, of course," he said.

Chavanne, lighting a cigar, smiled. "I said you were smart, boy. Yes, he's the one." He leaned forward conspiratorially. "But I think Jerrold Wald is in this also. Who had better chance to knock off his uncle?"

Chavanne rose ponderously. "I must get back to the shop. Take my advice and keep this under your hat. Sit tight until the police arrive. This is their job."

"Wait a minute—wait a minute." Romano, vaguely dissatisfied, clutched for a vagrant thought. "Grimmenden—how does he fit into this? What was he doing out in his aircar the time we were attacked?"

Chavanne flashed a brilliant smile and waved his cigar triumphantly. His air of polished composure had returned in a phenomenal manner. "Well, my boy, I don't really know. Grimmenden is the type of character who gets himself into the middle of everything, but who doesn't say anything. You see him all around, but you don't know anything about him. And if you—let's say—send back to Earth for information on him, you'll find there isn't any. There isn't any John Grimmenden, retired manufacturer of machinery.

"You know what I think? I think Grimmenden is a narcotics agent from the Interplanetary Police. After all, you don't think that the police are

going to let this asteroid go without keeping an eye on it?"

And, with an odd sort of cheerfulness, considering the death of Sigmund Wald, the sundry attacks, and the overshadowing presence of the narcotics agent, Chavanne walked off.

Romano leaned towards Helva and asked fiercely, "Do you remember how Jerrold Wald nearly had himself a fit when I mentioned plutonium poisoning yesterday? You didn't miss it, I know."

Helva retreated behind her professional mask. Romano, in a sudden spurt of insight, recognized this as a clear sign of conflict.

"Hey," he said. "What's between you and Jerrold Wald?"

Her eyes blazed a hot flame at him. "Jerrold Wald is a patient of mine. I know everything about him. I know him better than he knows himself."

Romano produced a meditative whistle. "So that's what you're doing around here. A nice way to make a living."

HELVA brought her temper down two octaves. "It's a good living. And a useful one. I'll tell you about Jerrold. It's not violating professional secrecy. You could check on it yourself by calling the right people."

"Go ahead," he said. "I'm listening."

The psychiatrist spoke quietly and intently. "Jerrold Wald had a good reason to react when you mentioned plutonium poisoning. Three years ago he killed a man that way—in the very way his uncle was killed. He was a neurotic young character—wild and spoiled. The murder was proven, clear and fair. Five hundred years ago he'd have been hung without further ado."

Shakily reaching for a cigarette,

Romano felt his mind lurch off in all directions, instantly building up a vast structure of possibilities. First and simplest: Jerrold had killed once, and he could go off his rocker and kill again in the same way. Second, he could be framed by someone who knew that he had killed before and who planted things to make it look like the same pattern. Third, Jerrold had nothing at all to do with it, but was scared half to death because he was afraid somebody would make a connection with what had happened three years ago.

Returning from his wild loop of thought-association, he heard Helva Hansen continue: "The court sentenced him to confinement with psychiatric treatment. After almost three years of this he was considered sufficiently cured to be returned to society. Then his uncle, Sigmund Wald, brought him here to Doreen and hired me to continue the treatment."

"That was quite expensive for Uncle. Why was he so interested?"

"Wald's main reason for coming here was to do some special research with the help of Chavanne's calculators. He thought it would do Jerrold some good to get away from Earth and at the same time continue his therapy. He hasn't had to support me completely, as I've acquired a few patients among the other guests here, while having a well-earned vacation on the side. Everybody's been killing two birds with one stone."

"And I was nearly one of the birds." Romano, with ruthless tenacity, insisted upon returning to the number one subject. "Why do you think Jerrold is innocent now? Can it be you are afraid to admit that one of your patients has relapsed after you thought you had him cured?"

HELVA SAT silently for a full minute, searching her mind for indications of her reactions towards Jerrold's behavior.

"I knew that Jerrold had gotten into bad company here," she said slowly. "The question in my mind is: how much can he keep hidden from me, his doctor? I honestly believe I would have known immediately if Jerrold had killed his uncle."

"In spite of the coincidence that Sigmund Wald was killed by the same method that Jerrold used three years ago, and, in spite of the fact that he was the closest to Sigmund and could have poisoned his coffee with the least difficulty—in spite of that I think he didn't do it. And I don't think he shot at us in the aircar. His mind was once sick enough for him to be a poisoner, but I'd be very ashamed of my abilities if he were no better now."

Romano reached a long distance to a wild assumption. "Why does it have to be that the same person did both jobs? Maybe Jerrold did poison his uncle while somebody else—perhaps Jennahagan—went after me."

Helva stretched her arms and stood up from the chair. "Maybe this and maybe that. Look. Give me one hour alone with Jerrold and I will know for certain whether he did or didn't. I tell you I know Jerrold Wald better than he knows himself. Literally."

Romano believed it.

"Okay," he said, following Helva out of the dining room. "So Jerrold didn't kill his uncle, and Chavanne is talking through his hat. What does that do to the story about the dope-smuggling and Jerrold's connection with Jennahagan?"

"The smuggling is plausible. As for Jerrold..." Helva stopped in the center of the doorway. "I think," she said, "that he can be very useful to

us. I'm sure he can."

ROMANO paced outside the door like an expectant father, scattering cigarette butts along the hall and holding a desultory conversation with Fido. Helva had been inside the room with Jerrold Wald for an hour by now, and Romano winced as he imagined the intense psychological pressures that she would be exerting upon Jerrold, utilizing the intimate knowledge of his mind that she had gained through dozens of hours of psychoanalytic interviews and through all the various techniques at her command.

He was certain that Jerrold could keep no secret from Helva for long.

Finally they emerged from the room—Helva quietly triumphant, and Jerrold pale but with less anxiety than he had shown before. Romano knew the signs. Jerrold had purged himself of his conflicts due to his activities with the smugglers and was back on the path towards mental peace.

"He's clear," Helva announced to Romano. "I was right. Jerrold didn't poison his uncle."

"Then it must have been Jennahagan?"

Helva paused, her mind occupied with the puzzle. "Jerrold doesn't know. The story about the dope-smuggling is true. Jennahagan is using this asteroid as a warehouse for the stuff. Jerrold has been playing around with him for the past few weeks. He got involved in gambling, needed money, and was led right down the path by Jennahagan. But apparently Jennahagan hasn't been telling Jerrold everything. He doesn't know anything about the death of his uncle, and he's been scared to death ever since the whole thing started. He's glad to be through with Jennahagan, and he'll

do anything we want."

Romano tossed away another butt. "Fine thing. But what do we want? Where's Jennahagan?"

"That's the catch. Right now Jennahagan is packing up, getting ready to leave. With the police on their way, it's getting too hot for him. He's out by his dope cache now, and if we wait until the police come he'll be gone."

ROMANO could see what was coming, and a violent feeling of reluctance swept over him. "So we should go out and pick up Jennahagan ourselves? Get all shot up again? The man's dangerous."

"Ha. You were the demon reporter all set to catch criminals, write a big story, and get a big bonus."

"So I was. It took a knock on my head to remind me that this is a game people play for keeps. A man can get hurt this way. But what's your big interest in this? What sudden passion makes you so anxious to foil the villain? I'll bet it's not a pure and sweet desire for justice."

Romano's eyes suddenly narrowed. "Oho. I get it. The evidence still points to Jerrold as having done it in his uncle. Professional pride is sitting on your neck. You have to prove Jerrold innocent because he is your patient and you'd be a sad case of a psychiatrist if your patient upped and poisoned his uncle."

Helva, suddenly furious, turned her back. "All right. Then wait for the police."

Romano caught her by the shoulders and turned her around. "Don't go away mad," he said. "Wait a minute and I'll pick up my gun. It might come in handy. And you had better put on some more suitable clothes."

An hour later, Romano felt that this

was where he had come in. Once more he sat in an aircar hurtling through the thin air a mile above the surface of the asteroid. Again Helva Hansen was at his side, and Fido, the robot bodyguard, stood in the rear.

This time, in addition, there was the thin, nervous form of Jerrold Wald, wedged in between Romano and the psychiatrist.

Now there was no searching for an unknown object, no circling and hesitation. Their trajectory arrowed directly toward a precisely-known destination. In almost complete darkness, only the dim lights of the instrument panel and the red tip of the cigarette smoked by Jerrold Wald were visible to Romano's eyes.

INNUMERABLE times Romano tried to visualize what he would find at the destination, tried to plan what action he would take. His heart beat slightly louder in his ears as he felt the small gun in his pocket.

He kept telling himself that this was nonsense, that he was a photographer and a reporter, not a policeman, that he had no business sallying forth in this manner to capture a smuggler and a murderer.

It took a woman to drive a man to this sort of thing.

"I would like to know," Romano said, "what happened to Grimmenden."

Helva shrugged her shoulders. "He's nowhere to be found. I checked everywhere I could think of—with Robot Service, with the hotel desk, with Chavanne himself. Disappeared."

An uneasiness insinuated itself into Romano's mind. "A real unknown quantity," he said. "Tell me, Jerrold, what do you think of Chavanne's theory about Grimmenden?"

"That he's a narcotics agent?" Jerrold asked. "Who knows? He hung

around Jennahagan a lot, but it never meant anything as far as I could see."

"The fact that he's disappeared could mean that he got to Jennahagan before we did. It would be good to know."

Romano felt himself tighten up as they approached their destination. In a few minutes Jerrold Wald motioned the others to keep quiet. Switching on the radiophone, he called Jennahagan, giving an identification code.

"That you, Jerrold?" Jennahagan's voice came through.

"Yes. You said you needed some help. I'll be down in thirty seconds. Give me a beam."

The aircar swooped downward in the darkness, the robot pilot steering its way along the directional beam from Jennahagan. Mountains loomed over their heads, blotting out the stars. Then there was the crunch of gravel under the car wheels and the feeling of motion ceased.

The three climbed out of the car onto the bare ground. Ahead of them loomed the almost-invisible form of a small spaceship. Focussing their eyes in the direction of a loud clattering noise, they saw a robot clamber down from the dark entrance of the ship, walk along a path for several yards, and then disappear into a low building which was partly obscured by a towering group of rocks.

Jerrold set out towards this building, motioning for the others to follow him. Fido took up the rear. As they neared the door, a robot emerged carrying a huge box.

They passed the robot and entered the door, single file. Jerrold went first. Perspiration on his forehead glinted in the light that came from an inner room as he opened its door.

Jennahagan looked up from the filing cabinet he was examining and nodded as he saw Jerrold enter.

"Good thing you came. You can speed things up by helping the robots move the stuff off the shelves. I'm moving out in ten minutes."

Romano slipped quickly through the door, allowing Fido to follow him instantly. "No you're not," he said. "We'd like to talk a little bit about the murder of Sigmund Wald."

"What the hell!" Jennahagan roared, and reached for his gun pocket.

"Hold him, Fido," Romano snapped.

THE GREAT form of the robot leaped forward, smashed into Jennahagan's round, hard body, and pinned his arms to his sides, even as he had one hand already in the pocket, clutching a gun.

As he gasped for breath, Helva Hansen came through the door. She walked up to Jennahagan, held motionless by the robot, and said, "You heard what the man said. We want to talk about a murder."

Jennahagan strained against the robot's arms. The red in his face deepened as he shouted in fury, "I don't know what you're talking about."

"We don't intend to waste time," Helva said, removing a tiny hypodermic kit from her shoulder bag. "You're a little excited. The doctor recommends a sedative. Then you can talk."

She approached his arm with a needle.

"Drop that thing, Doctor!"

The hard, high-pitched voice from the doorway sent a wave of shock through Romano's nervous system. As he whirled around he heard Helva's gasping intake of breath, and a moment later the click of the needle as it struck the floor.

"Fido, get him!" Romano barked, diving for cover.

The robot dropped Jennahagan,

thrust him aside, charged across the room toward the door, and met a pair of slugs that tore his middle open with a shower of tiny metal parts.

John Grimmenden, standing in the doorway, held his gun quite steady in a small, gnarled hand.

"Let's have no more of this nonsense," he advised them. "Nobody in this outfit has killed anybody on this asteroid and we're not going to unless you give us trouble. We're closing up shop temporarily because we don't care to be around while the police are looking for murderers.

"You don't think we'd bungle a job as thoroughly as that try on you? We're *professionals*."

His eyes fixed steadily on Romano and Helva Hansen, he snapped to Jennahagan: "All right, get on your feet and see that the loading is finished so we can clear out of here."

JENNAHAGAN clambered heavily to his feet, rage stiffening every muscle of his body. He walked towards Romano, fists clenched.

Grimmenden waved him back. "None of that now. They'll get what's coming to them, but our first job is to get out of here. By the time the police arrive we're going to be completely lost in this big solar system of ours."

"Let me kill them," Jennahagan demanded fiercely.

Grimmenden shook his head. "That would be amateurish," he said. "It would be unaesthetic. I have an aversion to committing murders that might be traced to me. We don't have time to do the kind of job which would be necessary here."

Grimmenden seated himself on a desk, the gun still unwavering in his fist, not for one instant allowing Romano a chance to draw his own weapon.

"But it's not necessary to kill them. These two will be sorry that they meddled into our business and, as for our friend Jerrold Wald, he will deeply regret his little double-cross."

For the next ten minutes the robots diligently removed packages from shelves and stored them in the bowels of the spaceship, while the three—Romano, Helva Hansen, and the quietly hysterical Jerrold Wald—watched in silence.

Finally the work was completed. Grimmenden backed cautiously through the door and said, in a deriding voice, "It's a long walk back."

He slammed the door shut and they heard various thudding noises on the other side, followed by footsteps rapidly retreating outside. As they rushed to open the door there was the sound of two gun shots, followed by crashings and clatterings.

They wrestled with the door—finally opened it to find one of the robots leaning inertly against it. Its bulk slid to the floor with a crash and they dashed outside in time to see the spaceship lift from the ground and disappear among the stars.

WITH GRIM cheerfulness Romano surveyed the scene. The controls of both air cars had been smashed by bullets. The power equipment had been rendered useless. There was water, but no food. No means of communication of any form.

Romano grinned paradoxically at Helva. "It really does look like a long walk back," he said, chuckling. "About a hundred miles, wouldn't you say, Jerrold?"

Helva Hansen had been observing him with restrained astonishment for the five minutes that had gone by since the spaceship had left them stranded. Presently she said, "Okay, Jack, what's the joke? Either you've

gone slightly psychotic, which I doubt, or you have something up your sleeve. Give."

Romano sat himself down on a rock outside the door of the building, still laughing to himself.

"Oh, they did a beautiful job of it! We're completely isolated. Only way we can get back is to hike a hundred miles over hill and dale. We could probably make it, but we wouldn't like it.

"Yes, Grimmenden's a real smart egg. Aesthetic objections to murder, ha.

"Except he forgot one very interesting point. This is such a wonderful asteroid we are on. We are waited on hand and foot by robots. Robot Service is at hand every minute of the day. Even the aircars are run by robots, and whenever something goes wrong with one of the cars, the central office knows it immediately and sends out help. Like the time we were shot down before."

Helva gave a sudden shout of laughter. "Oh, lovely. As soon as Grimmenden shot up our air car he gave notice directly to the central office."

Even Jerrold Wald cheered up at this. "Then all we have to do is wait!" And he, too, began to laugh.

THE ONLY feeling of regret which insinuated itself into his mind, producing a feeling of emptiness inside himself, came when he saw how Helva Hansen and Jack Romano held each other's hands, how they looked at each other, and how they laughed.

He turned away from them abruptly, his mouth twisted. It hurt, even being the third in the crowd. He turned back to the other two, stirring about in his mind for something to say, something with which to interrupt them.

"Chavanne was pretty far off base,

though he had known from the very beginning that for him the psychiatrist was unattainable.

Suddenly he felt conversation necessary. He felt that he could not stand wasn't he?" he said. "Thinking that Grimmenden was a narcotics agent. When all the time he was the big boss of the gang. Grimmenden was certainly one smart person. He never let me know who he was, even when I was working for him."

Romano gave a start and dropped Helva's hands, his mind abruptly brought back from a great distance. "Chavanne was far off base on many things," he growled. "He's been off base ever since the moment he tried to kill me without noticing that I was wearing a radiation detector."

Jerrold Wald blinked his eyes rapidly. "It would have to be him, wouldn't it? By simple elimination, if nothing else."

"Of course!" Helva snapped, a flush of anger on her face. "Once I was satisfied that you were not the one, it had to be either Chavanne, Grimmenden, or Jennahagan. The moment Chavanne suggested it might be the smugglers I knew he was lying. I knew it by the sound of his voice. I knew it because the method of killing was wrong. A gang of smugglers doesn't mess around with radioactivity and poisoning. When they kill, they kill."

"No, the murder of your uncle and the attempt on Jack looked like an amateur job, not a professional one. But we had to come here to make sure. We had to question Jennahagan."

"A job we certainly botched up," Romano laughed unhappily.

"Indeed we did. But I'm satisfied that the smuggling business and the murders are not connected. This leaves Chavanne."

"IT ADDS up," Romano thought back carefully. "Chavanne owns

the asteroid, runs everything on it. He could fix the robot memory bank so that it would not record his orders to the robots concerning the murders, and at the same time he told some of the others that orders were not being recorded just to give him a scapegoat in case something went wrong with his plan to make the murders seem like natural deaths. He had two beautiful scapegoats—the smugglers, and you, Jerrold.

"Chavanne could sit back and order the robots to do all his dirty work, while passing around his little rumors about who might have been the killer. He could blast the door of the radioactive dump, just to confuse the trail. At the same time he could play with me, recommend that I get a robot bodyguard. This threw suspicion away from him, while he could get rid of the robot any time he pleased.

"Chavanne was the one who knew where we were going the time we started to investigate the area of radioactivity. He was the one who waited there for us and shot us down.

"At that point he slipped up. His overconfidence threw him for a loss, because the robot bodyguard warned us—the robot that he himself had given to me. But his original, fatal slip lay in not recognizing the radiation detectors that Wald and I wore in our belts. He probably even went to the trouble of putting out of commission the detector in Wald's wrist watch so that it would seem plausible for Wald to walk into the radioactive area by mistake.

"Chavanne could do all this better than anyone else because he had the run of the hotel and because the robots were all under his command."

"But why?" Jerrold wanted to know. "Why?"

"There," said Helva, "is a question."

"Our first guess must still be right," Romano insisted. "Sigmund Wald and I were on the verge of discovering something important connected with the radioactive area. We find out what that was, and we have the entire story."

"It is hard to think of what it might be. Rare minerals? Valuable metals? Chavanne already owns the asteroid. Why should he worry about who discovers them?"

ROMANO shrugged his shoulders. "Who knows? Maybe the answer is not logical at all. Certainly Chavanne is not quite sane. A person who commits murder to hide a secret is by definition insane. Who says the motive has to be logical?"

They had to be satisfied with that for the time being. Further conversation circled hopelessly to no conclusion.

After a time, Jerrold asked, "How long should it take for an aircar to come?"

They had taken to watching the sky intently, looking for the glistening of the sun on a metallic speck.

Helva said slowly, "It took less than an hour the other time."

By now three hours had gone.

The tiny sun rose into a cloudless, incredibly deep blue sky. With utmost patience its imperceptible motion carried it high until, over the top of its arc, it began to descend.

Conversation grew more and more sparse as the day dragged along.

Romano searched through the building once more, could find nothing to eat. Hunger was beginning to claw at their bellies.

When the sun was setting, with no sign of rescue in the sky, Romano said, "We'd better start thinking."

Helva nodded her head. "Chavanne learns," she said meditatively. "He remembered how we were picked up

the other time, and he made sure that it would not happen again, by disconnecting the alarm circuits. We're not going to be rescued, because Chavanne fixed it that way."

Romano clenched his fists slowly, unclenched them, and exhaled a breath with a slight shudder over his entire body. "Another bit added onto the debt he owes us."

"We'll die of starvation," Jerrold whined.

"No, Jerrold," Helva said quietly. "There's a good supply of water. We can last long enough to walk back to the hotel."

"We need a map," Romano said, abruptly.

Jerrold Wald looked up. "There was one in my aircar."

ROMANO leaped to his feet and ran to the car. In a moment he returned, waving the paper triumphantly.

"Finally a break for our side," he said, breathlessly. He spread the map out on the ground, and the three squatted about it, straining their eyes in the meager twilight.

"We're here, and the hotel is there," Romano pointed out. He spread a pair of fingers to use as calipers and laid off the distance. "It's closer to one hundred and ten miles," he grunted. "Not good, but it could be worse. With flat terrain we could do it in four days. But with the rugged landscape on this rock... Maybe we'll find enough to eat to keep us going. I still have my gun..."

As he gazed at the map and recalled the rocky land that he had painted during the past week, the feeling of hunger within him turned into a sensation of sickening dread. In his imagination there blossomed a minutely detailed picture of the march that would be required through the wild country, without supplies, without

guidance, with unaccustomed bodies.

"But it's not impossible," he said, his voice filled with an effort to prevent hopelessness from showing through. "Among the mountains there are little valleys where we will be able to find plants and animals. We'll get along."

"Yeah." Jerrold's shoulders shook quietly.

"We'll need water containers. All we can carry. We'll need any knives we can find."

With a knife, Romano killed an unsuspecting and unafraid rabbit. It broiled deliciously over an open fire. Hunger put aside for another day, and strength restored, they continued across the grassy plain.

This gave them an easy ten miles, after which Romano insisted that they halt for the night. His planned route included two more such oases, and there was no need for the three to kill themselves with over-exhaustion.

More important, he wanted to be at the edge of the radioactive area the next morning.

The place was so poorly marked that had it not been for his close attention to the map, Romano would have missed it entirely. One signpost was actually found, but for the rest, a person could have wandered into the dangerous circle without warning.

Romano checked his counter. It registered nothing but normal cosmic ray background. He raised a querulous eyebrow to Helva.

"Of course," he said, dubiously, "the circle is ten miles in diameter, and the actual radioactive section might be just in the center of it."

"If there is any there at all," Helva said, indifferently.

The thought struck deeply and rocked Romano back on his heels. "It fits," he said. "And yet it doesn't fit. If Chavanne were trying to hide

something in there, the easy way would be to mark it *radioactive area* on the map and put a fence around it. But then why would he kill off Sigmund Wald and try to kill me for going near the place? We wouldn't have tried to go into the danger zone.

"If this place is actually not radioactive, it makes the mystery harder to understand. I think we should go in a little further."

Jerrold Wald grumbled at the extra walking, but he had no alternative. Romano had the map.

THE TERRAIN began to get rocky once more, and they stumbled with many curses through the jagged, splintered crystals. Romano stopped every hundred yards to read his tiny radiation meter. Finally, after they had gone over a mile, he began to get results.

"Gamma rays are coming through over the background. They become stronger as we approach the center. Chavanne was telling the truth for a change. The place is really loaded with hot stuff."

"We go back to the hotel now?" Jerrold demanded.

Romano nodded, wearily. He hated to give up the idea that the radioactive area was connected with the murder, untenable as the idea had turned out to be. Worst of all, elimination of the radioactive circle as the location of Chavanne's secret put them right back where they were at the beginning.

It left them knowing absolutely nothing.

Carefully consulting the map, Romano laid out a line of progress in a new direction, and the three proceeded to plod forward. It was uphill for a long distance, and agony in their legs began to compete with the emptiness in their stomachs.

When the sun was three quarters of the way set, Romano called a halt, and they proceeded to tear apart the cold carcass of the small animal they had killed and roasted in the valley that morning.

WITH MUCH coaxing, Romano induced the other two to rise and make a few more miles before nightfall, much as he himself longed for rest. They dragged themselves to the top of the hill and stood for a moment, panting for breath.

Helva Hansen seated herself on the ground and said, "Jack we simply must stop for the night. I'm finished."

Romano ruffled her hair with his hand. "Okay, baby. You'll feel better tomorrow. I'll look for a soft rock to use as a bed."

The light from the sun cut across the craggy spires almost horizontally. Ahead of them was a precipitous drop into a shallow canyon hemmed in by bare, flinty walls. Romano's heart sank very low as he surveyed the path they had to traverse the next day.

Abruptly every muscle in his body stiffened and the jump of his heart sent the blood roaring in his ears. What his eyes had caught was a round metallic shape which reflected the light in a brilliant glare. From a distance its size could not well be judged but, comparing it with the height of the canyon walls, Romano was certain that it must be a thing of tremendous dimensions.

He shouted for the others to come and look. They scrambled to his side and stood for many minutes peering with mind-wrenching curiosity at the spaceship. A ship of this magnitude had simply no business in this place. It was an absurdity that made them quite certain this was the secret Chavanne was hiding. This was the ship whose presence had caused

the death of Sigmund Wald and had finally brought them to this place.

It was late the next morning before they managed to clamber down to it. The gigantic silvery bulk towered far above their heads and stretched an incredible distance forward and backwards.

"What a monster!" Romano hoarsely exclaimed. "How long has this been here?"

Helva's eyes darted in all directions, taking in every detail of its appearance, noticing that there was not a crack or a dented plate.

They walked around it. On its nose they saw great golden letters which spelled out a name whose syllables tumbled among forgotten memories in Romano's mind: *GALAXY I*.

"You know this ship?" Helva asked.

Romano shook his head. "I heard its name mentioned just once before. Years ago. By a couple of the wildest scientists in the solar system. They were talking about the possibility of traveling faster than the speed of light. They told me that, believe it or not, a faster-than-light ship had actually been built—the *GALAXY I*. Imagine—over a hundred years ago men were able to travel faster than light!

"But this was just at the beginning of the third interplanetary war. The ship disappeared, and the laboratories in which the faster-than-light principle—the superdrive—had been developed were wiped out, together with most of the continent. All records were lost, and today the *GALAXY I* is little more than a rumor."

"While all the time it has been hidden here." Helva tilted her head back to see the letters welded to the prow. "No wonder Chavanne was willing to commit murder to keep this secret. If he could duplicate the superdrive it would make him one of the

most important men in the system."

"NOT ONLY IN THE SYSTEM, BUT IN THE ENTIRE GALAXY."

The voice, amplified to tremendous proportions, reverberated among the rocks of the canyon, bouncing back and forth until it died out in a muttering thunder.

The three jerked their heads source of the voice.

"If you will come to the entrance port of this ship," the voice continued, "I shall be happy to receive you."

Romano grasped Helva's arm and whispered into her ear, "It's Chavanne, inside the ship. He's been watching and listening to us—for how long?"

The psychiatrist nodded. "The man is dangerous. Watch your step."

THEY WALKED slowly around the ship, hugging its sides, until they reached the great entrance port. There was nobody to be seen.

"Where are you, Chavanne?" Romano called.

"Inside, of course," Chavanne's voice boomed out. "Come in and join me. Don't stand out there in the hot sun." He laughed.

Romano stood in place, hands on hips. "We'd like it better if you came out here to talk to us," he said.

Chavanne's voice snapped with impatience. "I said you come in!"

A blast of energy spurted dazzlingly from a projector at the side of the port, throwing up a gush of flame and pulverized rock from the ground behind them.

Jerrold Wald cried out in fright and stumbled forward. Romano, his face rigid with anger said, "I guess we'd better go in, like the man said."

The entrance port opened into a large hallway that drove straight through to the geometrical axis of the ship, where were located elevators

and conveyor belts. The ship was empty of life and completely still except for the voice of Chavanne issuing from one loudspeaker after another as they passed along the corridor.

Following the directions of Chavanne they came to a bulkhead in the center of which a great round port stood open. The sign-plate above the port read: *LIFEBOAT NUMBER 1.*

The three stopped before the port. "Suppose we don't go in?" Romano demanded.

For answer there was the crash of a heavy door in the bulkhead behind them.

"There's only one way out now," Chavanne's voice told them unemotionally. "You either go into the lifeboat, or you stay where you are and starve to death."

"Is there a choice?" Romano muttered, and stepped through the port. The other two followed, passing the double doorway and into the cramped quarters of the lifeboat.

As Romano expected, the heavy steel plug slammed shut behind them.

ROMANO'S fury put an unsteady edge on his face. "We certainly walked into this, we did," he growled. "Anybody with an IQ higher than a chimpanzee's could have seen this play coming, but we walk right into it, eyes open, on our own feet."

Helva put her hand on his arm. "Don't blame yourself. Once Chavanne saw us coming there wasn't a thing we could have done."

Jerrold Wald, completely undone, collapsed into a chair.

There was only one thing to do, Helva decided, and that was to keep Chavanne talking. Her only weapon was her voice and her knowledge of the human mind.

"Chavanne," she said. "Are you listening?"

"Listening, my dear," Chavanne's

voice said conversationally.

"It would be so much more pleasant to see you, rather than talk to a microphone."

"I'm afraid that this is not to be a pleasure call. These are working hours, and there is work to be done."

Work! Romano drew a wild guess from his subconscious.

"Chavanne, have you gotten the superdrive operating yet?"

"Of course. The superdrive has been working for over a month. One final test is required. It has been difficult to decide how this test should be conducted. Your fortunate visit here has solved the difficulty."

"Yes?" Romano waited.

"You see, at the beginning of the Third Interplanetary War this ship was hidden on this asteroid while certain changes were made. When the time came for the ship to join the wrong. A flaw had developed in the wrong. A flaw had developed in the superdrive generators. The moment power was applied to the preliminary geowarper, every man in this ship died. The ship remained where it was, unharmed.

"Between the confusion of the war and the destruction of the records, almost all memory of this ship was lost. Fifteen years ago, when I was compiling material for the information bank at Washington, I came across sufficient data, hidden in an obsolete file, to allow me to calculate where this ship might be. I followed it up, found the ship, and bought the asteroid. For the past ten years I have studied the principles of the geowarp and the superdrive, so that I will be able to duplicate them myself."

"That was very remarkable, Chavanne." Helva thought that a slight amount of oil would help.

"Indeed. And the results of my work are not going to be stolen from

me. First it was Sigmund Wald, the old fraud. He thought I wouldn't know why a force-field expert would be nosing around here. Then Romano began to spy around. Very clever, posing as a photographer, but it was quite transparent."

"LOOK, CHAVANNE," Romano broke in. "You can't keep us here. The police will be arriving in two days and when we turn up dead or missing you will be in trouble."

"No trouble at all," Chavanne denied. "The fact that the smuggler Jennahagan has departed abruptly will be considered very significant. In the meantime you are going to be useful to me. You are going to perform an experiment for me."

"An experiment!"

"A very simple one from your point of view. You simply remain where you are and talk to me. No trouble at all."

"And what will this prove?"

"If you remain alive while traveling on the superdrive, it will prove that I have corrected the fault which killed the previous operators of the ship. I am sure that my work has been good, and so you may expect a pleasant trip."

Chavanne's voice cut off and remained unresponsive to any further conversation. In a moment they heard the thudding sound of heavy relays closing on the other side of a partition in the lifeboat. Heavy machinery whined into sudden activity.

Romano stormed about the room in sudden panic. The large exit port was locked. There were two inner doors, one fore and one aft. There was no furniture except for five padded seats. The walls were lined with cupboards, now empty. There was nothing to get a grip on. Nothing to break.

Helva sat back in one of the seats, her eyes partly closed. "Take it

easy," she told Romano, in a tired voice. "No use knocking your head against a stone wall."

Chavanne's voice came to them again from the concealed loudspeaker. "We are now ready to begin. The lifeboat will leave the *GALAXY I* and take a course away from the sun. I hope to receive frequent reports from you."

A powerful whine arose from outside the boat, and they felt a strong sense of motion as the catapult ejected them from an opening in the side of the great spaceship. The generators within the lifeboat acquired a deep, complex set of beat noises.

"The superdrive is on now," Chavanne said, "and you are traveling at double light speed. I would appreciate hearing a word from you."

ROMANO raised an eyebrow at Helva. Would anything be gained by keeping Chavanne in ignorance as to the outcome of his experiment?

"I wouldn't try holding out on me," Chavanne said, mildly. "You see, if I think that you are dead, then I shall allow the boat to travel out into interstellar space. If you say something to let me know that all is well..."

"Then I suppose you'll bring us back to talk to the police," Romano snarled. "You rotten liar. I think you're nothing but a bluff, a fake. How can you talk to us by radio if we are traveling faster than light?"

Chavanne chuckled. "This is perhaps the most interesting aspect of the geowarp principle. Communication and remote control of the boat is effected, not through the electromagnetic four-dimensional spacetime continuum, but through a five-dimensional hyperspacetime embedded in a six-dimensional continuum. The Lorentz—what the—!"

Chavanne's voice broke off on a

note of shocked alarm. In the background there was the buzz of a warning signal.

"Damn! A spaceship overhead." The voice was remote, as though Chavanne had moved to the other side of the control room.

Romano and Helva Hansen stared at each other. Jerrold Wald leaped out of the seat in which he had been slumped.

"It's the police!" he cried. "It must be!"

The sounds coming through the communicator were indecipherable—the noises of Chavanne moving around the control room, muttered curses, the clicks of switches being operated.

"The police were not due for another two days at least." Helva could not permit herself the luxury of false hope. "And even if it is the police, they are down there and we are up here. How can they help us?"

"We could—" Romano began, and stopped abruptly, the speed of his thoughts far outracing his words. If it were the police, and if somehow they got into the control room where Chavanne stood, and where the police could hear them through the communicator—then a warning could be given—a message could be spoken. But he must not give Chavanne the idea.

AT THAT moment the noises from the communicator ceased, leaving a vacuum of sound in the tiny room.

Jerrold Wald choked, "He's cut us off," and collapsed again into a chair. Helva Hansen buried her face in Romano's shoulder as he held her very close to him.

In complete silence now, they hurtled through space, past the orbit of Jupiter, on towards Saturn and the unimaginable stretches of void be-

yond. Completely cut off from the four-dimensional universe, leaving behind the spectrum of electromagnetic vibrations, powerless to change the course of their little vessel, they huddled in the lifeboat, nerves drained of emotion.

Savagely, Romano pulled himself away from Helva. "There must be controls to this boat," he rasped, moving swiftly to one of the locked inner doors.

It was solid, impossible to jar with his body. Compared to the massive outer locks, however, it was relatively fragile. Loading his gun with an explosive shell, Romano aimed at the lock and motioned the others to stand back. The blast of the shell tore at their eardrums and left a small, ragged hole in the metal of the door.

Romano pushed through and found the control room a tiny cubby, jammed with instruments. Their bewildering array marched across the face of the console. He stopped short in front of them.

He felt Helva close behind him. "It's dark outside," she said.

Jerkily, he looked up, and for the first time realized that the black panels above the control console were transparent.

"You wouldn't expect to see stars out there while we are traveling on the superdrive, would you?" he heard Helva say.

HE SHOOK his head dumbly.

Faced with the black emptiness of subspace outside the boat, and with the maze of unfamiliar instruments on the panel in front of him, he felt a congealing dismay in his heart. He was just as lost with the controls under his hand as he was while locked in the other room.

He said, fighting back his panic, "If we sit down quietly, we can figure this out. All we have to do is

stop and go back in the direction we came from."

"Are you sure? What do you know about the geometry of five-dimensional spacetime imbedded in a six-dimensional continuum?"

"Not a damn thing." But as he continued to study the control panel, his equilibrium began to return. Each function was labeled. The number of operations was limited.

"First thing," he said, "we get back into normal space and see where we are. I don't understand this method of determining position."

He reached his hands out, hoping that he performed the operations in the correct order, and began snapping switches. His breath came hard as he waited for the results.

Nothing happened.

Finally Romano sat back in his chair, cursing long, fluently, and unblushingly. "The boat's wired for remote control. The manuals don't work."

He felt this to be the final insult. The last opportunity for them to turn back had been stolen from them. There was nothing left but to open the air valve and finish things quickly.

They sat silently in front of the control panel, gazing out of the windows into the featureless subspace. After an indefinite time, Romano said, "I wonder if we have passed Pluto yet."

Then they sat in a wordless stupor for a further period of time.

THE COMMUNICATOR burst into activity. "Captain Mellor of the Interplanetary Police speaking. Are you all right?"

"Yes, we're all right! Where is Chavanne? Don't let him get away."

"Chavanne is here, under arrest. You are being returned to Doreen."

The lifeboat landed beneath the

towering prow of the *GALAXY I*. The Interplanetary Police ship shared the crowded canyon floor with them.

In the executive office of the police ship they saw Chavanne, crumpled in a chair, his head in his hands. Bedraggled and dusty, they approached Captain Mellor.

"Let's eat, Captain," Romano pleaded, "then talk."

The missing threads of the story wove themselves into place around the dining table.

"As we approached Doreen, our instruments detected the operation of a geowarper," Captain Mellor related. "We drove to the source of the disturbance and apparently arrived just a few minutes after your boat took off. We landed and met Chavanne at the entrance port of the *GALAXY I*. He seemed normal enough at first, but the moment we asked him what he was doing with a geowarper he went into a fury and said something incoherent about how he was the only person in the solar system who knew about geo-

warpers and the only one who knew how to build a superdrive.

"We had to give him a shot of a hypno-drug before he'd tell us what was going on and how we could make contact with you people."

Helva's eyes sparkled. "His paranoid mentality could not conceive of the idea that other men, by independent research, could rediscover the superdrive. To him, a scientific discovery was a *secret*, that had to be stolen, that had to be guarded."

At a point in spacetime one hundred miles away and ten hours later, Romano walked jauntily into the communications room at the hotel, with Helva hanging onto one arm. They entered a booth and Romano seated himself at the little table there to teletype the message:

"Dr. Felice Romano, Cybernetics Research Institute, Mexico City, Mexico. Hello, mother. Thanks for the dope on Helva Hansen. Yes, this is it."

THE END

OF ONIONS AND ROSES

By Lee Owens

WITH APOLOGIES to Gertrude Stein, a rose is not to one nose what it is to another. Science, trying to understand what makes a sniffer sniff, is getting nowhere rapidly. One would think the sense of smell the easiest of all the senses to analyze, much easier, say, than sight or hearing. But this is not the case. The sense of smell has the lab boys utterly baffled.

There are two theories about smelling that have acquired prominence, both of which are worth considering. In this age of such profuse literary and musical effort, some have gone so far as to say the sense of smell is the most important sense!

The first theory of smell assumes that objects give off slight gaseous or semi-molecular emanations. These emanations reach the mucous membranes of the nasal passages and, through chemical actions, affect the nerves and hence, eventually,

the brain. This we call "odor".

The second theory too suggests that the substance gives off emanations, but these do not react chemically within the nose. They instead absorb certain wavelengths of infrared radiation given off by buds within the nose, and this absorption of heat by these selective molecules is what we call "smell".

Both theories are full of holes and neither fits the situation exactly. For example, certain substances have extremely pungent odors unmistakable under any circumstances. But when the scientists try to measure some vapor pressure which, a gaseous emanation from them requires, they fail to detect it at all. Obviously the "gas theory" is not the answer.

On the other hand, many substances have pronounced vapor pressures and no odor at all. How can this be explained?

From this evidence it is apparent that the sense of smell is really subtle, defying powerful analysis. Smell is big business—look at the advertisements! And the future may even produce the "smellies", those variations on film and television. Some might even claim, judging from certain film and TV effort, that the "smellies" are here already!



**Three hundred and fifty years of Utopia.
Then, a complacent, self-satisfied world
poised on the brink of blood and horror**

CHAPTER IX

THE STRUCTURE WEAKENS

BY THE year 2200 Man had come into his own, in the sense that manpower had become the Solar family's greatest shortage. The teeming millions of Earth, when drawn upon for Lunar, Martian and Venusian populations, were discovered to spread rather thin.

The Eugenic Laws passed in 2098 were repealed in 2180. (1)

Here difficulty was encountered. The public habits of one hundred years were found to be deeply rooted. The

Eugenic Laws had, to a great extent, emancipated women from their most harrowing function: begetting children. Also, the people had been educated to feel that to indulge in having large families was somehow indecent.

The whole affair is a perfect example of morals made expedient to the necessity of the times. It must be said of the Federation leaders that they showed an excellent grasp of the problem, and extreme skill and good sense in arranging the reversal of the trend.

(1) EDITOR'S NOTE: The Eugenic Laws (*Amazing Stories*, May 1952, p. 136).

They showed, also, a complete lack of sensitivity in that they appealed for help to the very organizations they had fought in achieving the original passage of the Eugenic Laws: the churches. (2)

They found, fortunately, that the religious institutions—the orthodox churches—while possibly as opportunistic as the next group, bore no grudges and operated according to the principles in which they believed.

All in all, the campaign for an increased birth rate was carried on cleverly and with most perceptive propaganda. There was little resistance from the male sex. With the women, however, it was a different thing. As a group, they did not give up their long-established emancipation without great reluctance. (3)

The usual number of female champions sprang up, of course, in defense of what they considered rightful gains of their sex. But the women were probably lost before they started. After all, nature and human inclination were on the side of the Federation planners. The birth rate began climbing. Within five years it had increased to the point where a shortage in hospital and personnel facilities relative to maternity was discovered to be increasing just as fast. A situation which was quickly remedied.

Many historians of the time dug back into history for a precedent for the expanding frontier situation, in order to predict current trends. Manley Jacoby was the only one certain he had found a clear—but extremely wild—precedent.

It is a mystery why Jacoby, in projecting a picture of violence, completely ignored the focal center of violence which had been a part of the Universe for years, the hell-holes of Venusia.

Termed "The Solar Cesspool", the sealed city on the planet Venus had, by 2200, become what amounted to a Universal penal colony. Into it had drifted the misfits of all the orbitals: the malcontents, the nonconformists, the violent and the sadistic. All those who could not come to terms with life.

In a sense, exactly what Jacoby described had existed in Venusia for many years. Just what the official policy relative to the pest hole was, is not clear. Quite obviously it was a "hands-off" policy.

As time passed, it became increasingly hard to keep World Federation representatives in the city. More than one official handed in his resignation rather than board ships destined for Venusia, and such appointments gradually came to be known as votes of no confidence. Rather than discharge an inefficient diplomat or one who had come into disfavor, one appointed him Portfolio Representative to the hot planet. A resignation was of course

(2) Cardinal Melzer, *The Embattled Church of Rome* (Whitehead & Bane, 2085).
John Hazelton, *Decline of Morality* (Methodist Publishing Company, 2087).
Bishop Julio Martinelli, *The Case of the Roman Catholic* (Roman University tapes, 2090).

(3) When the campaign finally came out into the open—in the last decade of the twenty-second century—it was quite naturally seized upon as a subject for mirth and coarse jesting in the dissolute dives of Venusia. Many songs and jokes were done on the subject, ranging from the really clever to the flatly obscene. One song, sung first, it is believed, by Nora Carpentier, a French songstress of the Venusian drinking clubs, borrowed the rhythm of an ancient adage of unknown origination: "You can lead a horse to water, but you can't make it drink."

The lyrics of Nora Carpentier's version were more precisely geared to current difficulties: "You can lead a woman to a bedroom, but you can't make her breed."
The above was classed as mild humor by Venusian standards.

automatically in order. (4) service became known as an "appointment to Venusia". (5)
 So common did the custom become that a discharge from government This stigma did not apply to lesser

(4) Manley Jacoby, *The Lawless Ones* (Viking Printemps, 2206): "There have existed in times past many frontiers for human development and exploitation. One stands out, though, as a perfect forewarning of things to come.

"In the nineteenth century, the westward trend of the population of the United States of America began in earnest. The vast areas of the mid-continent of North America, from the Mississippi River to the Pacific Ocean, lay virgin and waiting, tenanted mainly by hostile but unorganized tribes of natives erroneously termed Indians. The westward trek of the white land-grabbers—painted of course in the literature of the time as high-minded, God-fearing pioneers bent upon honest expansion—flooded over this land in droves.

"The seat of United States government, set upon the eastern coast, was hard put to keep up with its foot-loose subjects. In fact, did not keep up with them.

"As a result, established law for the most part went out the window. Each man became to a great extent his own law. An amazing situation developed in which man carried a weapon—jungle law became the law of this newly populated land.

"As would be natural in such circumstances, the better-known citizens were the ones who became most proficient in the use of these weapons. They were almost invariably lawless men. The moral code was, of necessity, very low. Murder was condoned on the most superficial evidence that the killer was functioning in self-defense.

"The lengths to which such subterfuges went is illustrated by a story the writer came upon in his researches prior to the writing of this book. The incident took place in a drinking house of a settlement called—most picturesquely—Tombstone, in a section of the United States termed Arizona. For what appeared to be no reason whatever, a man standing by the liquor-dispensing shelf—called a bar—took his weapon in his hand and destroyed the life of the man standing next to him.

"The person in whom was vested the responsibility of what law existed—called a sheriff—inquired immediately into the killer's motivations. The sheriff was completely mollified by the following defense: 'Wal—Sam there sure looked like he was a plannin' to hawg-leg me the minute my back was turned. Had to beat him to it.'

"It can be stated with certainty that such conditions will be with us again. They vanished in the United States of America only when centralized, responsible government caught up with the people waiting to be governed. We ourselves are fast out-running governmental authority. The new Martian settlements on the far frontiers of the planet which will spring into being when the land is opened up, will be settlements of the same nature. Each man will be his own law. Heroes of violence will again come into being. The nineteenth-century 'Old West' will live again."

(5) Welk Sabin, a comparatively obscure government worker of the time, dispatched the following letter to a friend in Old Chicago. The letter is dated May 10, 2204, and is to be found in the Calais University Archives. It reads in part: "There is a condition of mystery on this infernal planet, Roark; a condition hard to explain. I am convinced that the moral decay and decline of the men stationed in this place is a thing beyond their control.

"I have seen too many good men come here with high hopes and great ambitions. Men of good blood and fine heritage. I have seen the change that comes about. Certainty turned first to doubt, then to bewilderment and confusion. The slackening in personal and moral habits. The rotting. The final decay.

"Just what it is—exactly what virus contaminates the atmosphere of Venusia—no man can say. It is not the environment, the human contacts. Of that I am sure. Too many men entirely able to control their own destinies in other places have fallen in Venusia, to blame so obvious a cause.

"Sometimes I get a feeling the rottenness is in the very planet itself. A wild, seemingly foolish statement, I know. But what else is there to say? Many factors can be pointed out. The perpetual restrictions? This foul city occupies two hundred square miles. A man can do a lot of wandering in that amount of space. The climate? The heat? The dreadful humidity? The temperature in the sealed city—and no one goes elsewhere—is seventy-eight degrees Fahrenheit at all times. The feeling of isolation from the Solar family? Space globes arrive in and leave the quarantine areas daily.

"No, none of these. Yet, moral decay is in the air. It soaks into one's skin, bores into the marrow of one's bones. I say that only a moral giant can come out of Venusia unmarked.

"Under no circumstances would I let Habe go with the government if appointment to Venusia is a possibility. Don't do it, Welk. No father has the right to subject a son to this."

officials, and Venusia was used as a proving ground for those entering governmental service. And an excellent proving ground it was. Any World Federation man who could come unscathed from five years in Venusia was well rated.

Jacoby was only partially right. Central governmental control did weaken as mankind sought the far frontiers of the Solar family.

There were not, however, any repetitions of his "Old West" lawlessness. Perhaps this was avoided because a few hundred years separated the early American from the planetary pioneer. Perhaps the later man was a more responsible one. Or, perhaps, the reason lawlessness did not follow the frontiers was that the lawless could live in greater comfort in the hell-hole of Venusia. Or perhaps mankind had developed a greater sense of adulthood and responsibility.

The weakening took the form of adequate local government. The World Federation was, of course, represented in every area of expansion, but there was little for the representatives to do.

Government can become strong only under conditions where it is needed and therefore finds excuses to move in and assert itself.

Also, another great impetus of strong government—present in earlier centuries—was now lacking.

Taxes.

There were, of course, taxes levied and paid, but they were not for revenue production so much as a symbolical gesture. The payment of taxes in former centuries was by force of grim necessity. (6)

The government, of necessity, was run with the same money the people used to purchase the necessities of life. If government funds came from any place but the pockets of the people, the money became worthless.

Under the system of centuries later—in operation even today—the gesture of paying government levies was the procedure by which a man indicated his allegiance to the government in question. (7)

So, on the new frontiers, strong and

(6) Proof of this statement is found in a quaint and excellent book of verses, *The Collected Poems of Dorothy Parker*, to be found in the Library of the Pennsylvania Engineers. In this book the twentieth-century rhymester states flatly, "Nothing is sure but death and taxes".

(7) Lavender Platt, *The Rise and Fall of Governmental Disciplines* (Hatteras Photo Press, 2251), states: "The British Empire was founded upon the need and opportunity of world exploitation. The need existed in a handful of relatively advanced people on an island off the European-Atlantic coast. The opportunity existed in the backward peoples roosting on natural resources wanted by the English islanders.

"In a comparatively few generations, the English established lordship over India, Canada, Australia, and part of Africa. To all intents and purposes it was a British world. The keystone of their empire shattered when colonies in the central part of the North American continent were allowed to declare independence from the Empire through stupid military mismanagement on the part of the English.

"This, however, was but a trigger. Other factors entered into it. Factors the English were smart enough to see in advance. The main one of these was the inability of the English to keep the world in perpetual subjugation.

"With inspired diplomacy, they let the Empire they could not hold slip away from them while still maintaining the myth of Empire. Their subject lands were 'allowed' the comparative freedom of dominionship. India was finally 'given' complete freedom.

"So, through their inspired generalship, the British dominators went out, not in a welter of blood, but still maintaining an impotent empirical structure and also the genuine affection of their previously subjugated peoples.

"A nation of born diplomats, they even obtained sustenance from the United States of America, the Central-continental colonies that cut away from them by rebellion and grew to be the most powerful nation on earth."

adequate governments functioned, implemented and created by the local groups themselves to meet their personal needs. Thus, the World Federation became in fact a local government in itself. One that served the needs of Earth while operating merely as a token government to the peoples of the other planets.

So, a situation existed whereby the World Federation was regarded by the Solar family population with affection and respect. So much so that the impotency of the World Federation was overlooked, probably because there was no necessity for seeing it.

CHAPTER X

SCIENCE FINDS NEW FRONTIERS

As the twenty-third century dawned, science was delving deeper—ever deeper—into the eternal mysteries. With infinite patience and determination the scientists strove to discover the secrets lying behind the Seven Sub-Atomic Gasses.

In the wake of their studies, they left by-products that made every man more and more a king.

While the basic secret behind the gasses eluded them, they began to achieve an understanding of the primary causes as involved therein. A faint inkling of the awful power behind the primary structure—a power bordering close to the domain of the Fundamental Entity—made them tread softly from a sense of fear and also from an instinct of reverence.

Strange discussion arose from newly-acquired knowledge. In the fifth decade of the twenty-third century there began arguments as to the wisdom of subdividing the Solar System.

Gordon, the foremost student, at the time, of the Seven Gasses, proposed igniting Neptune and thus turning it into an outer sun. He sought to prove that by doing this both Saturn and Uranus could be made habitable.

He would force Jupiter, Saturn and Uranus in to new orbits around Neptune, thus forming a second Solar System. Gordon claimed that under those conditions he could force the new orbitals into solid substance in a comparatively short time.

The project was defeated, however, man not having at that time developed sufficient courage to take the chance of annihilating the system regardless of the benefits of success.

By 2280, Simon Barlow, a physicist associated with the Pennsylvania Associates, had made great strides in the gaseous transposition of matter. Using a neutralized governing channel, composed of a sub-atomic gas solution and the "memory quotient" of the light rays developed therefrom, he successfully transferred a volume of *Plutarch's Lives* from Minneapolis, Earth, to Fifth City, Mars.

The process consisted of reducing the volume to basic molecules which were streamed through free-void in the gaseous channel to their destination, where they were reassembled according to "memory pattern" by electronic impulse. (8)

It is of interest that a great scientific debate followed this successful experiment. Both Kane and Zowicki, men of huge scientific stature, while not attempting to detract from the importance and the magnitude of Barlow's experiments, maintained the process was not transfer of original material but destruction and exact

(8) *Barlow and the Vanishing Pennies* (Calais University tapes, 2287).

duplication of the material. They claimed the book that arrived on Mars was not the same one that left Earth. It was one of those arguments that could neither be proved nor disproved. By analyzation, Kane proved a difference in material, but Barlow discounted this by arguments relative to change of material under stress and strain of dissolution and reassembly. (9)

With high hopes, Barlow approached the problem of transferring living matter. This one, of course, stopped him as it has stopped scientists to this day. The experiments were dismal failures.

Try as he would, Barlow could not reassemble the life force of birds, rodents, reptiles, or even microbes, after transfer became known as the most potent antiseptic ever found. Any object reassembled at its destination was, in itself, completely sterile.

Scientists, of course, continued to delve, but there seemed little now that they could do for mankind. They might answer many ponderous questions—unveil many mysteries—but man had just about everything he could ever want.

As the twenty-fourth century came into being, it was possible to look back upon an astounding three hundred years. There was no inkling nor indication of the hurricane to come. There

was only the record of miracle piled upon miracle.

So man had become, in a sense, a creature without purpose. His cup was full to the running over thereof. The fruits of Eden which it is said man threw aside, were again his for the taking. Through dim, hopeless ages, he had dreamed of the glittering gate. Now it had again swung open. All objectives had apparently been reached.

But all was not well. Beneath the surface of this paradise lay a time bomb.

Perhaps it was in the very nature of things that this cycle would end. Nothing is static in creation. Nothing can stand still. And the Solar family of the twenty-fourth century had but one direction in which to travel.

Down.

It had been too long that the line had gone steadily upward. It had to change. But, strangely, no one believed this. No one could see any possibility of an end to paradise.

From what direction could it come?

EDITOR'S NOTE: In the next installment, the unknown author tells of the first cracks that appeared in the world structure, as events and time throw down the shadow of things to come.

THE END

(9) The pros and cons of this historic scientific debate can be found in any public library under the headings of Barlow, Kane, or Zowicki.

When private eye Nick Saturday set out to locate a girl, he first had to learn how 99 automobiles could disappear into a building that couldn't hold more than 10—how an ordinary-looking doll could drive a woman to madness. But even these things did not explain what the girl was doing in the refrigerator.

Don't miss "The Girl Who Loved Death" by Paul W. Fairman

in the September 1952 **AMAZING STORIES**



THE CLUB HOUSE

By Reg Phillips

UNLESS this issue of *Amazing Stories* is the first science-fiction magazine you've ever seen, you've read time-travel stories. If you've read time-travel stories, you've heard of or thought of the paradox of going back in time and killing your grandfather when he was a boy, thus making it impossible for you ever to have been born. There's an even more pertinent time-travel paradox, though. If time travel is possible, then at some distant time in the future it should be discovered. Then the people in the future could travel back to any time in the past. Therefore they could travel to right now, and probably would. And we would know about it and be able to go back with them to the future. Therefore, since we can't, time travel will never be possible. There're holes in that, but it will do as a stepping stone to something I'm going to discuss—whether there are other intelligent beings in the universe.

We are on the verge of attaining space travel, from all indications. This year or next, or ten years from now, we will make a serious attempt to reach the moon. If we succeed we will go on, to Mars, to other planets, eventually to other stars.

In time we will travel to every star in the galaxy. We will send ships to other galaxies. We will become independent of the duration of the earth, or of any single planet. Billions of years from now we will have populated hundreds of thousands of planets.

Now take that line of reasoning in reverse. Assume that somewhere in the universe another intelligent species exists or could exist. Let's say it existed ten billion years ago. Then it seems quite likely that its spaceships would be landing here once in a while. Instead of speculating as to whether there is other intelligent life in the universe, we would be in contact with it, and would have been throughout known history. If not, why not?

It seems extremely improbable that we are the first intelligent race in the universe. We have learned too much about other stars to believe that. There are many other planets in the universe capable of evolving life and intelligent species. And, in spite of the theory of an expanding universe whose past is finite, it's extremely probable that, ten billion years ago, somewhere, there was a planet capable of evolving intelligent creatures. A planet with natural resources that made it possible for them to escape into space, and travel.

Since no such beings have contacted us openly, since there is no authenticated instance of their coming here, we can draw two alternative conclusions. Either space travel is impossible for some reason, or alien travelers have purposely kept their visits to us secret. About now I can picture you thinking about the flying saucers. And there have been stories of alien visitors in all ages. We have nothing to prove that those stories are true: that aliens did visit us. None of our science is

known to have been given us by extraterrestrials. There are no concrete artifacts such as wrecked spaceships or skeletal remains of alien beings. There's nothing. And there should be if there have been visitors.

Let's examine the possibility of there not having been visitors from space. If there haven't, that would be a strong indication that space travel is impossible. If it's impossible, why is it?

We can't really know until we get upstairs. Then we will know. But we can discuss some of the factors that might affect space travel.

Astrology is one of those indicative factors. According to astrology we are affected by the planets. A man in Brooklyn charted the curves of the stock market and found they corresponded with the cycles of the moon. He got it so accurate that he is able to predict market changes in a broad sense.

I have a friend who makes astrology his passion. He has used me as a guinea pig at times, and has made predictions that seem too accurate for an astrology that has nothing behind it.

If the moon and the planets affect us here, how will they affect us away from here? Is it possible that going out into space would affect the thinking so drastically that it would make space travel fatal? If so, there could be thousands of planets with intelligent beings on them, without any such race ever achieving successful space travel.

What about cosmic rays and other hard radiation? Our atmosphere absorbs such radiation to a great degree. In space, away from the protection of our atmosphere, would concentrations of hard radiation be so great we couldn't live many hours?

What about the pebbles and boulders that enter our atmosphere and are burned to ash before they reach the ground? Is there a defense against this dense flak that travels a hundred times faster than rifle bullets? If there is no defense, what are the odds against a ship's reaching the moon? Less than even? If so, the ships we send will be wrecked. Only now and then will one reach its destination. If the odds against being hit before reaching the moon are favorable, are they favorable for going another million miles into space? Probably not.

If only one of ten ships could reach Mars without being hit, we could reach Mars, but we wouldn't have tours to Mars for your vacation.

So we come to possible methods of solving those potential problems that might defeat us.

Astrological factors. We might use hormones and other drugs to control emotional balance. Radiation factors. We might devise shielding. But weight or mass will be a factor that will take power to overcome, so such shielding must be light. And from what we know of cosmic radiation it would take enormous shielding mass to cut it down even a little. Space flak. We will have to devise radar-controlled rockets that can detect something the size of a pea a hundred miles away and move out of its way in five or six seconds. Or we will have to devise something that can divert such high-speed objects. One method that seems a natural would be to have the ship highly charged positively or negatively. Any object approaching it would arc over when it got close, and then like charges would repel each other and divert it. That might just work in actual practice.

There is another unknown entering

the problem of space flight. That unknown is gravity. We have theories about gravity. We actually don't know too much about it. Astrological factors may be related to gravity rather than radiation. If so, getting away from earth's gravitation force might have drastic effects on the mind that can't be overcome.

When space flight begins we will probably send robot-controlled ships at first. We'll read the instruments by radio and learn what the ship gets into. If we find we can successfully get ships as far as the moon without being destroyed, we will try ships with people on board. Not until then will we know how space flight affects a human being. No instruments can tell us that ahead of time.

All of which adds up to this: space flight isn't just the job of getting a ship out into space. Difficult as that is, it's the simplest task to perform. When that comes we will have just begun work on the problem.

We might find all the problems I've touched on simple to meet. In that case man could travel to the moon on the third or fourth spaceship to go there. Or we might find some of the problems quite difficult. Then it might take fifty years for a man to reach the moon after the first remote-control ship gets there.

Or we might find very shortly that it will be forever impossible for man to leave the earth. Then we will have to resign ourselves to the fact that we are planetbound and that, when the earth goes *boom* in some cosmic catastrophe of the future, that's the end of the human race.

One thing seems certain right now, and that is that in the next twenty years we will know one way or another. And *if* we find space travel to be possible, the odds are very great that we will find out we aren't alone in

the universe, and alien beings are waiting up there right now, to welcome out first ship—or destroy it.

* * *

Maybe one or two of you who are reading this are in or near Anchorage, Alaska. Earl J. Moncrief is starting a stf club there, and especially wants fans at Elmendorf AFB and Fort Richardson to get in touch with him. His phone is Elm. 22125. For those of you who want to write him, his address is RA 13404266, Btry D 96th Gun Bn, APO 949 c/o PM, Seattle, Wash. He would like anyone who cares to to write him. Why don't you? It gets lonesome up there....

In Vancouver, B.C., there's a fan club called the Hibited Men. Contact is Norman G. Browne, 1150 W. King Edward Avenue, Vancouver B.C., Canada. They have a sales department to help Canadian fans get magazines. They also have quite a library for its members to use. They plan to publish various fanzines in the near future, too.

The club bulletin of the Philadelphia Science Fiction Society was sent to me this time. It's one of the old-time clubs. Its secretary is Dave Hammond, 806 Oak Street, Runnemede, New Jersey. The PSFS is entertaining the idea of putting in its bid for the big annual convention for 1958. In its favor is the fact that Philly is near enough to all the big eastern stf clubs to bring them all there, and at the same time far enough away to be completely independent of them.

A letter from Bacil Guiley, 219 Jefferson Street, Warren, Pa., should give some of you faneds itchy palms. He spends quite a bit of money buying fanzines. He wants to know if I could give him an idea which of them

are worth the money. He wants to buy as many as he can afford, but wants the best. Why don't you send him a copy of your fanzine and let him decide for himself if he wants to subscribe? He's a live customer!

And there were three letters asking me to contribute something to the contents of fanzines. A story or an article. One wanted my autobiography and some pictures. That touches on something that has no perfect solution. I just can't write something for every fan editor who wants me to. I can and do occasionally write an article of some type, generally humorous, for a fanzine. It depends on whether I get an idea that would go in a fanzine (and not immediately lead to a saleable story instead!), and whether I get the mood for fan writing. With me it does take a certain mood that comes rarely. And I certainly would shoot myself if I sent something bad to a fan ed and put him in the position of having to reject it! It makes me feel bad to have to turn down so many requests. Sometimes they're impossible to fill. For example, one fan ed recently asked me for an autobiography, pictures, and a complete list of all stories I've had published, where, and under what bylines. That would be both monumental and impossible. If enough of you were to buy my hard-cover book coming out soon, *Frontiers in the Sky*, published by Shasta at 5525 South Blackstone, Chicago 37, Illinois, the first five hundred of which will be autographed, maybe I could hire a secretary to track down everything I've written.

Fred Brown, a writer most of you are familiar with, has moved to the Los Angeles area from Taos, New Mexico, where he lived the past three years. He's one of the last to desert that picturesque spot which used to be a writers' and artists' colony. Mack

Reynolds is leaving there this spring, and so are Jack and Dot deCourcy.

Fred is a prolific writer, not only of science fiction, but also of mystery. Modern writers have to be prolific. Look at all the magazines and books and pocket books on the market! Shakespeare was a piker by comparison.

Speaking of Shakespeare, here are the fanzine reviews:

* * *

POSTWARP: 15c; Ray C. Higgs, 813 Eastern Avenue., Connerville, Indiana; a letterzine. Which means it contains mostly letters that discuss other letters, etc., making for arguments and entertaining discussions. It's somewhat slanted in interest toward NFFF, the National Fantasy Fan Federation, and is an excellent example of the mailbox tie of friendship that unites fans of all ages into one big unofficial group. The contents of Postwarp in this issue is letters from Garden Grove, California; Newport, Vermont; Dalton, Georgia; Brooklyn, New York; Seattle, Washington; Canton, South Carolina; Pittsburgh, Pennsylvania; San Francisco, California; and so many other places there's no use going on to list them.

Now to the NFFF itself. K. M. Carlson is its new president. The new directors in the annual election are Ray Higgs, Eva Firestone, Stan Woolsten, Max Reasler, Rick Sneary. The new secretary is G. M. Carr, 5319 Ballard Avenue, Seattle 7, Washington. G. M. Carr is a woman. She's the one to write to if you want to join. Membership is a dollar a year.

* * *

RHODOMAGNETIC DIGEST: 25c; Don Fabun, 2524 Telegraph Avenue, Berkeley 4, Calif. Official organ of the 'Elves', Gnomes', and Little Men's science fiction, chowder and marching society, a group which fandom needs like it needs a hole in the head. Along with their recent petition to the United Nations for extensive claims of mineral rights on the moon, which got them mentioned on news broadcasts and other places, they are making a bid for attention by loudly proclaiming that *Amazing Stories* never has a good story, *Galaxy* doesn't have science-fiction stories, *Imagination* has one good story of 1500 words which is "unfortunately...too superficially written to do justice to the theme...", *Fantastic Adventures* "is a perfect example of how low a magazine can sink," and *Thrilling Wonder Stories*' editor "must have been rather tired".

One of the major perpetrators of the "Little Men's" bid for notoriety is quite proudly proclaimed as a teaching fellow

in the English Department of the University of California, a Ph.D. by the name of David G. Spencer. Mr. Spencer's special field is Eighteenth Century literature. This obviously makes him just the man to review science fiction.

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OPUS 2: 2/25; W. Max Keasler, Box 24, Washington U., St. Louis 5, Mo. A nice, well-rounded fanzine, whose policy, as stated in the editorial, is, "...printed for the fun of it. *Opus* doesn't want to be serious and constructive. So don't complain about it not being serious and constructive". And it lives up to its policy. Plenty of fannish artwork. Several colors of mimeo paper, too. This is a fanzine you can enjoy even if you are a Ph.D. in English, even to the extent of showing your superiority by tearing it apart. Every page shows humor and a sure sense of fan proportion. "The Immoral Storm" by "Walt Moscovilliss" is a take-off on Sam Moscovitz's and Walt Willis' separate histories of fandom, placed in the future, when big-name fans have been made into saints by latter-day fandom. No table of contents. But after looking through the twenty-eight pages I see that a table of contents would take up two or three pages—and never be read anyway. Because it's the kind of zine you just naturally read all the way through, and enjoy.

* * *

JOURNAL OF SPACEFLIGHT: official publication of the Chicago Rocket Society. Michael Conley, 237 S. Addison St., Bensenville, Illinois. You can get a copy by writing and requesting one. It comes regularly with membership. There are two types of membership: active members \$5.00 a year; associate members \$3.00 a year. If you are in or near Chicago you are invited to attend their next meeting, the first Friday of the month at 8:00 p.m., Room 518, Roosevelt College, 440 S. Michigan Blvd.

The February issue contains a very interesting article on the possible nature of extraterrestrial life, authored by J. England. Michael Conley discusses an instrument for determining the deceleration firing point for a rocket attempting to land on a planet.

A book review, "The Chemistry of Hydrazine", by Audieth and Ogg, is of great value from the standpoint of rocket fuel.

"Rocket Abstracts" is a department conducted by Norman Bowman in which highlights lifted from dozens of current periodicals are given.

Every issue of this journal is filled with items that every sf enthusiast should know. Send for a sample copy. It's free, and it will introduce you to something definitely worth having.

* * *

CONFUSION: 5c; Tommy Lee Tracy, 937 Florida Ave., Lynn Haven, Florida. "The Novelty Fanzine." Fiction, artwork, and stuff. All nice. Even a poem, and a long letter column. You can't lose at a nickel an issue. Especially when they have a

nice story like "Forecast", by Shelby Vick.

* * *

SLUDGE: by Bob Foster, 2 Spring Gardens, Southwick, Sussex, England. And Bob enclosed a letter with his fanzine. Pay attention to what he says. You can get his fanzine in exchange for your old prozines (the one you're reading now, your new *Fantastic*, *Galaxy*, etc.). Some of you did that on my previous review of **SLUDGE**—and didn't get the fanzine. Here's why.

Dear Rog:

Thank you for the swell write up in Feb. issue. Your review brought me quite a few subs for which I again thank you; but unfortunately some of the mags that arrived here had no return address on. It had been torn off in transit, so I've got a few mags on which I've not been able to fulfill my part of the bargain. If you could mention this and those people would write me I could send **SLUDGE** to them, as I feel very guilty about this.

If the fans wrote their name and address inside the covers of the mags they send, it would help a great deal.

Yours truly,

Bob Foster

That's right. Instead of throwing this copy of *Amazing Stories* in the attic when you finish it, you can get one of the finest fanzines to come out of England for it. More to the point, you can give someone, or perhaps a dozen someones, the opportunity to read it. But follow Bob's advice when you send it.

Now to review **SLUDGE**. This is the third issue. It has gone over to printing, with line-block illos. In its editorial it seems its readers are pressuring Bob to change its name to something more pleasant than sludge. (How about Spludge, or Stfludge?)

* * *

SPACESHIP: 10c; Bob Silverberg, 760 Montgomery St., Brooklyn 13, N.Y. Bob really turns out a wonderful mimeo job now. I can remember back when he started a few years ago. He was twelve or thirteen years old then. He had a small mimeo and sometimes his stuff could barely be read. He's mastered mimeography.

The February issue contains an article by Lilith Lorraine that was to have been her speech at the Nolacon, only at the last moment she wasn't able to attend. It's "Science and Civilization".

"Speaking of Science Fiction", by Morton D. Paley, is an article about the purposes, place, and scope of science fiction which the "Little Men's Chowder, Marching, and Yapping Society" would do well to read, since it discusses things of which they are ignorant. (Maybe I shouldn't make remarks like that, but they seem to want to be notorious, and I always like to help everyone. To be quite fair with them, they seem to like some of my own stuff occasionally.)

Irwin Donefield of National Comics Publications discusses the problem of foreign subscriptions. Charles L. Morris

authors a moody short story with an illo by Richard Z. Ward. "Report From Australia" is a regular feature by Roger Dard and will make you feel you know the fans down under. And there's poems and many other items in SPACESHIP.

* * *

INDIANA FANTASY: 20c; Lee A. Tremper, 1022 North Tuxedo St., Indianapolis 1, Indiana. First issue. Not too good a mimeo job yet, but they'll catch on quickly. The contents are excellent. Four short stories, including "The Floating Hands" by Dr. Keller.

There are really good cartoons scattered through the zine by the artist James R. Adams.

This zine is sponsored by the Indiana Science Fantasy Association, a fan group formed in the fall of 1950. Any fans who live in Indiana or who are former Hoosiers can write to Lee about it.

* * *

GHUVNA: 10c; a quarterly; J.N. Fillingier Jr., 148 Landon St., Buffalo 8, N.Y. A first issue. In a note written on the contents page Mr. Fillingier asks if I would write something for his zine. I wish I could, but I've covered that before. Anyway, judging from the names on his contents page, he doesn't need me. He snagged three of Raymond Clancey's poems, has three stories by Dave English, Harold Kaiser, and Jerry Klemp, three articles—one about Burroughs, by D. C. Richardson—three features, and quite a bit of artwork. It's the best job of mimeography on a first issue I've seen. The cover is terrific.

* * *

BEGINNING THE FUTURE: free copy on request; James C. Unknown, Box 1329, Grand Central Station, New York 17, N.Y. Wonder if that's his real last name? Anyway, this is a real-up-and-coming newszine. It started with a circulation of four, I think, and has worked up to twenty-five, expecting to reach a hundred soon. It comes out once a week.

* * *

PHOENIX: 10c; Jeff Taylor, 933 West Latham, Phoenix, Ariz. A half-sheet-sized fanzine with 28 pages. Featured in this issue is "A Teacher Looks at Stf," by Fenton Peacock. Although he shows a great deal more perspective and sense than the Ph.D. of the "Little Men", he qualifies his praise of stf by insisting the delicate student mind must be told what stories to read. Only the best, he says. But what is the best? Why, that which is read and liked by most. PHOENIX features a center section of hektographed cartoons that are always quite entertaining.

* * *

OOPSLA! 10c; Greg Calkins, 761 Oakley St., Salt Lake City 16, Utah. Second issue. This issue features a letter from a guy who came here in a time machine. Not only unreadable, but Gregg went crazy trying to type it onto the mimeo

master sheet. Archaic spelling. Shelby Vick authors a short fantasy, "Dear Alice". Lemuel Craig has an article, "The Organizing Instinct". It discusses that instinct as it has appeared in fandom, and rather comprehensively, too. Konner's Kolum reviews some current prozines and fanzines.

* * *

WARHOON: not for the general public, but for a SAPS mailing. Its editor, Richard Bergeron, RFD 1, Newport, Vermont, wanted me to mention his fanzine and let you other fan editors know he would like to do artwork for them. From the samples in his fanzine he's a lot better than average and shows distinct originality.

* * *

VIEWS IN STF: 5c; bulletin of the Baltimore Science Fiction Forum. Ray J. Sienkiewicz, 802 W. 35th St., Baltimore 11. Meetings of the club will be held at North Aves., at eight p.m. on April 24; May 21; June 25. Drop in on them. Contents of the zine are mostly reviews of current stf, done intelligently.

* * *

BLACKLIST: free on request; G.L. Black, 12096 Rosemary, Detroit 5, Mich. In which its editor has a lot of fun, and you will, too, on reading it. In "To the Editor" he composes representative letters to the various prozines, each one of which is good for a laugh. "War of the Apes" is a fantasy of the period after World War III. Perhaps the best thing in the issue is a nameometer for stf authors to use in choosing names for their characters. It's a roulette wheel with the alphabet on it. Not a bad device. I got the name Soipdalgief that way once.


* * *

That's all the fanzines. You know, getting back to the subject of my editorial, and also the subject of one of the articles in THE JOURNAL OF SPACE FLIGHT, I often wonder if human life did originate on the earth. The probability is that it did. We are so like the apes in structure, and they are so like dogs and the bear family, that it seems unlikely they aren't related through a common origin.

But when you consider all the legends about man's origin, and the current flying-saucer mystery, you begin to wonder if there might not have been extraterrestrial contacts with us, or even an original landing of some life form similar to ours, from which the whole related family descended.

—ROG PHILLIPS

SAM MERWIN'S



SCIENCE FICTION

BOOKCASE

A LAND by Jacquetta Hawkes, Random House, New York (\$2.75).

While Mrs. Hawkes' unique study of the world's story through study of her beloved native Great Britain, is not, strictly speaking, science fiction, yet it is so *planetary* in concept and development that notice of its publication definitely belongs in this column. Furthermore, and perhaps more important, it is a marvelous book in its own right.

To those of us who have been acquainted from childhood with the magical charm of the late Kenneth Grahame's *The Wind in the Willows*, *A Land* has many softly ringing echoes. Although she frequently deplores the acquisitive folly of men in uglifying many of the island's loveliest aspects, Mrs. Hawkes has an unerring eye and ear for the soft green loveliness and grey craggy austerity which blend so incredibly to make England, Scotland, Cornwall and Wales.

But *A Land* is much, much more than a blatant Fitzgerald travelogue. It digs far beneath topsoil and tundra to the bedrock of creation, moving not only over present surface, but serenely through the buried layers of the past—and ahead into the future.

Nor is this fascinating volume any more concerned with places and things and their history than it is with people and the other forms of animal, vege-

table and insect life that have made England their home at one time and another since the creation. We watch though the author's all-seeing eyes the first birth of protozoic life in the surrounding seawater, the earliest fish, the lungfish and reptiles, including the various types of saurians, great and small, who ruled land and sea supreme for more than a third of a billion years.

In short, we get a complete education, not only in structural geology and paleontology, but in history, at the same time that we are held tightly in the velvet grip of Mrs. Hawkes' soft-napped prose. We learn of the early continental heartlands, floods and ice ages and, in the pathetically short period of man's existence, of his migrations, struggles and achievements, of his age-long life in rhythm with the land that sustained him, to be so ruthlessly amputated by the exigencies of the machine age inaugurated by Watt, Rumford and Davey.

We see man, in little more than a century, stripping soil and bedrock alike of the heritage it has held inviolate for the better part of a billion years, destroying natural processes to fit the foolishness of his own temporary needs, outlawing himself from the unending tides of life around him.

It's a jewel of a book Messrs. Random House have printed in this one. Somehow it recalls to us the egregious

failure of H. G. Wells' effort to synthesize the history of our planet and its people in *An Outline of History*. Where Mr. Wells, peering through the large lenses of his cosmic binoculars, managed to give our story all the warm personal impact of a somewhat off-focus photograph of the dead cold moon, Mrs. Hawkes, by reversing the glass, has managed to present the whole story vividly, personally, excitingly, as if viewed in some incredibly intricate bowled-in Japanese garden. It may not be fiction but it is science in what may perhaps be its finest and most readable form.

* * *

THE WEAPON MAKERS by A. E. van Vogt, Greenberg, New York (\$2.75).

This is an amplified and well-revised and edited edition of van Vogt's second story in the much-discussed Weapon Shops series. Actually, we believe, it is the third of them to be published, which makes the chronology a bit cockeyed, but in its present form it has sufficient fascinations to stand on its own two warring houses.

The setting for all these books is laid in a far-future Earth, officially ruled by the longest-lived, if not legged, dynasty ever conceived by man or author, having endured at the period described in *The Weapon Makers* several times as long as all the dynasties of Egypt.

To balance human forces against tyranny we have the Weapon Shops—privately owned corporative units, protected by all sorts of scientific trickery against dynastic interference, to which any persecuted non-criminal may appeal and win justice. Nominally it is the function of the shops to supply weapons to all who wish—said weapons being so attuned to their

owner's personality that they can only be used in righteous self-defence. A pretty conceit, if somewhat abstruse on the frammis.

The personal conflict is fought out between Robert Hedrock, the sole human immortal, founder of both the Isher dynasty and the Weapon Shops, yet loyal not to either but only to humanity as a whole—and the beautiful Empress Innelda, who is somewhat shocked upon marrying him to discover her mate had been previously spliced to all hereditary empresses in her family tree, thus ensuring the continued purity of the line.

There is a fraud on man's first interstellar flight to be uncovered, and some eccentric alien spider folk who operate without emotion and menace the whole galactic shebang. For all of his supermanic devices, Hedrock is hard put to it for awhile to bring himself and the world through the various resulting waves of crises in one piece, as well as to make certain that Innelda brings his offspring into the world at the cost of her own life.

Good reading for those who like to solve jigsaw and crossword puzzles, although the pseudo-tragic finale remains very much pseudo, we fear.

* * *

JACK OF EAGLES by James Blish, Greenberg, New York (\$2.75).

In case you're wondering what a jack of eagles is, it's a card belonging in the fifth suit of a game of bastard super-bridge launched during the thirties, which was supposed to sweep the country like mah jongg or canasta and didn't.

In Mr. Blish's fast-moving and frequently exciting novel, the eagle suit represents that small percentage of humans possessed of more or less well-developed psi qualities—telepathy,

telekinesis, clairvoyance and the like—otherwise known as wild talents.

His hero, Danny Caiden, a thoroughly bored trade-paper editor, discovers himself to be quite a lad with the off-center perceptions, to his considerable distress and dismay, especially when he gets fired from his job and arrested by the F. B. I., and becomes a sort of human rope in a monstrous tug-of-war between good and evil psi-societies.

This is a swift, ingenious story which, while it comes at times perilously close to the rim of implausibility, somehow manages to stay within the realm of assumed logic. Nor does the fact that Mr. Blish can write do his opus or its readers any harm.

* * *

THE IMMORTAL STORM by Sam Moskowitz, Henry Burwell, Jr., Atlanta (\$2.00).

During the half dozen years between 1945 and 1950 installments of Mr. Moskowitz' definitive history of science fiction fandom appeared with clocklike regularity in Dr. A. Langley Searles' scholarly quarterly, *Fantasy Commentator*. Now, some two years after the final appearance of both quarterly and history, a group of Southern admirers have mimeographed and bound the 42 chapters into one volume.

If you want to follow the excitement, the early conventions and conclaves, the feuds and achievements of sf devotees in the years leading up to the first "World Convention" in 1939, this is your dish. It's all here.

BLOODY, BATTERED BACTERIUM



By Roy Small

THAT BANE of human existence, the miniscule bacterium, is running into tougher and tougher competition. With strange rays, with potent chemicals, humans are running far ahead in the perpetual battle between themselves and the insidious world of the bacterium. Bacteria are really representatives of the plant world, simple souls, it is true, but as potent as they are simple. Their terrific reproductive ability has always given them the edge over men when the chips were down, but chemicals and rays are no respecters of numbers.

All the familiar techniques of sterilization of the past seventy-five years have served well in this perpetual knock-down battle. Chemicals have been the most effective agent. Fighting fire with fire, bactericidal bacteria have also served. But the latest techniques involve the use of rays, gamma rays, X rays, infrared rays and, of course, ultraviolet rays. The last two types named have been the big agents, but re-

cently a tremendous amount of work has been done with the first two, particularly X rays, which, after all, differ very slightly from the rays emitted by radioactive matter.

Most of all, the rays have been used in sterilizing food. Scientists have been much surprised to find that that perfect breeder of bacteria—milk—can be preserved for as long as seven weeks without any change in characteristics after exposure to a brief blast of X rays. Until now, killing the bacteria and harmful enzymes hasn't been the real problem. It's been easy enough to do that, but the end product in foods has usually tasted a lot different from the original! X rays may be the answer to this chronic nuisance.

Streams of electrons, just like an electron beam in a cathode ray tube or a betatron, also serve to sterilize foods effectively so that they are preserved indefinitely. This method is just as promising as the X ray method. If some collective bacterial "brain" could realize the methods and aims of the human strategists who are trying so successfully to eliminate them, they'd howl, for science is really on the warpath. Some bacteriologists predict we'll see the day when bacterial diseases will be only a memory....

THE READER'S FORUM



AND MORE GOOD YEARS TO COME

Dear Mr. Browne:

Unfortunately, though I have long been a sf fan, my imagination doesn't seem to be able to solve the little problem of how to say, "this is my first letter", etc., other than thusly.

Quite seriously, though I have enjoyed AS and FA for a good two-thirds of my twenty-nine years. I thought it about time to express my appreciation for the years of wonderful entertainment. I might add, too, that through the years, in my opinion, you have printed but few poorer-type novels and shorts. Thanks also for the Reader's Forum and the chance to peek in mentally at other fans. Most of my friends look askance at "those pulp mags".

Congrats and other such pedantic expressions apropos of the time. Incidentally, should this hit the printed page, would you print my address? It would be interesting to hear from other fans who might find time to write.

Thanks again.

James H. Lyles
354 Greenwich Street
San Francisco, California

PROBLEM IN MYTHOLOGY

Dear Sir:

While reading your mag the other night a proposal, and a challenge, came to mind. The proposal: Thor's hammer that returned (myth); the Australian boomarang (fact).

The challenge is obvious. What is the connection? Myth, located almost diametrically opposite on our bit of cosmic dust from fact.

Why don't you put it to your readers? I'd like to get opinions on it. Merrit said, in one of his many stories, that Thor's hammer had a rope tied to it with which he retrieved it. I've yet to see that corroborated in legend. But then I haven't read all legends.

I've read AMAZING a few years. It always rated tops with me, but I like anything even remotely related to science fiction. This is my first letter, but I had to get it out of my hair so I could sleep tonight. I know your readers will explain

this to me, probably in 50 different ways. Thanks.

R. Woodworth, Jr.
503 West Eureka
Lima, Ohio

Probably.

—Ed.

IT COSTS NOTHING TO TRY

Dear Ed:

I am 15 years old and itching to write sf stories. Could you encourage me? Have there been any stories published which were written by young men? If so, I would like to try.

Just now I've been looking over your June ish of AS wondering if it will be any good.

Now! To get down to rating your May ish stories. In first place I find "Empire of Women". Say! Tell the artist who did the inside cover of "Empire of Women" that he made Cap Alain look 70 years old and bald-headed. It struck me funny. Next I find "Monkey in the Ice Box"—good. Third is "World of Whispering Wings". The rest are just average. I want to compliment Don Wilcox, in the April issue of AS, on his "Howling Hatchet". The artist did a very good job on that also.

Anybody that is interested, I have some back copies of AS and others dating from 1942-1948 and various other sf mags. I have some Richard S. Shaver mags, if anybody is willing to buy them cheap. I am willing to sell any back copies I have already read.

Mike Stebbins
504 Ninth Avenue, Apartment 5
Seattle 4, Washington

The earlier you start, the sooner you get there, Mike.

—Ed.

COME RIGHT IN, FRIEND.

Dear Mr. Browne:

I would like to join the ranks of the women's contingent of science-fiction enthusiasts.

AMAZING STORIES has been my favorite since I was a teen-age kid sister with unbounded hero worship for the "big

brother" who wrote science-fiction stories—which brings me to the reason for this letter.

My brother, Warren E. Sanders, wrote three stories and one poem which were published in **AMAZING STORIES** over the period between 1930 and 1934. I have been trying, unsuccessfully, to obtain copies of the magazines in which these stories appeared not for myself, but for the twelve-year-old son of the author. He is his Dad's own boy—reads science fiction, is a "Space Cadet" and roams the space lanes daily. And, incidentally, the kid-sister herb-worship I feel is nothing compared to what he feels for his dad. I thought it would be wonderful if I could make him a present of the issues in which his father's stories appeared.

I always read your editorial page, as well as the Reader's Forum; and it occurred to me that you, or one of your many readers, might be able to help me in locating these back issues. There must be some science fiction collector who has them, and might be willing to sell them.

Anyway, here is the data, and here's hoping!

THE STERILE WORLD—Warren E. Sanders—1930 or 1931

SHERIDAN BECOMES AMBASSADOR—1931 or 1932

A SEQUEL TO "SHERIDAN"—1932 or 1933

A poem, **THE MOON**—1933 or 1934

Any response, or advice, will be very sincerely appreciated not only by this writer, but by "Space Cadet Sanders".

Very sincerely yours,

Mrs. Harry Tinstman
1051 Chapman
San Jose, California

Hope you find them.

—Ed.

MR. STEVENS REMEMBERS.

Dear Mr. Browne:

This is my first letter to **AMAZING STORIES**, although I have read it for quite some time. As a matter of fact, the first sf story I ever read was "The Green Man" in the October 1946 **AMAZING STORIES**. I have read almost all of them, and it is my opinion that when Shaver came he brought down the quality of your mag and it has not climbed to as good a standard as the pre-Shaver days. Maybe part of the reason is the loss of the de Courcys, the Yerxas, Burroughs, and Cabot. I am glad to see Wilcox writing again, as he seemed to have stopped for quite some time.

The cover of the May issue was not very good; as a matter of fact, I think it was the first one since the April 1950 cover. I think the best interior illustration was the one on page 54.

I rate the stories as follows:

"The World of Whispering Wings"—

Phillips and Wilcox are the best authors. "Empire of Women"

"Master of the Universe"—are you publishing the document exactly the way you found it?

"Come to Venus—and Die"

"Monkey in the Ice Box"—first part's like a detective story.

Way back in May 1950, you had a story by William Carter Sawtelle, "Slaves of the Crystal Brain". That story was really terrific. Has he sent any more stories in? I for one would really love to have more stories by him.

Whatever happened to Blade, Bloch and Livingston? They were all pretty good. I really enjoyed O'Brien, too. Where is he?

In 1948, 1949 and 1950, and the first month or two of 1951, American pulps were banned up here. I have gone down to second-hand bookstores in Seattle (Washington) several times, and by doing this I have got nearly all the missing pulps. However, the February 1951 issue of AS has eluded me, as it has done to the other fans here in Vancouver. Would you have a spare one kicking around your office or is there any fan who would sell me one?

I doubt you can answer my next question, but I'll ask anyway. Recently I bought the Summer 1943 **FANTASTIC ADVENTURES QUARTERLY**. The mag had its first few pages missing, and I am very anxious to know who wrote the feature story for October 1942, which was entitled "The Ice Queen".

Since you have been going since 1926, you must have a lot of fine old stories which haven't been seen for two decades or more. Why don't you make an **AMAZING STORIES ANNUAL**, in which you would put some of the older classics for the newer readers as well as for the old readers, the regulars?

The last query is this. Why couldn't you put the date of when the next issue will be on the stands at the bottom of your contents page?

With these two thoughts I'll leave you till the June issue hits the stands.

George Stevens
1608 West 28th Avenue
Vancouver, B. C., Canada

We have had no stories from William Sawtelle or Alex Blade in some time. Robert Bloch is still turning out his superior brand of fiction. Mr. O'Brien was killed in the Battle of the Bulge.

—Ed.

QUICK REPORT

Dear **AMAZING** Editor:

Re June **AMAZING STORIES** and **FANTASTIC**.

As cover—excellent, though my issue is a rather abstract version due to the color

plates" not printing correctly. It's good, anyway.

Stories—I have only finished the first two stories.

"Secret of the Black Planet"—not too bad, although it was clobbered with space oprey.

"They Fly So High"—Hmmm, I don't know what to think of this one. I guess I shall read it again.

Reader's Forum—Re Mr. Bill Tuning and his remarks on R. G. Jones, W. H. Hinton, and Ed Emsler. I have something to say about these fellows, too.

I have always enjoyed Jones' covers, although I agree that he was used much too often. I wouldn't mind seeing him back once in a while. Two of his covers for the issues of FANTASTIC ADVENTURES with the lead novels "The Justice of Tor" and "Excalibur and the Atom" in them stand out as some of the better stf artwork.

I have never seen any of W. H. Hinton's stf illos but I have surely enjoyed those beautifully penned illos he has done for the old MAMMOTH WESTERN.

Emsler's illos in the past have been very good (this cannot be said of the ones for the lead novel of the June ish). I see by the contents page and the illo on page 76 that Emsler and Ed Alexander are one and the same. I believe that he uses the *nom de plume* of Emsh sometimes too.

FANTASTIC—I give up trying to say one story is better than another. They were all equally excellent.

Illos—David Stone's illos for "What If" were possibly the best in the mag. If you don't believe me, just read the descriptions of the man and woman while glancing back at the upper left-hand illo.

I for one would be all for an AMAZING ANNUAL containing stories printed before 1940.

Naaman Petesron
1471 Marine Drive
Bellingham, Washington

VALUABLE SUGGESTION?

Dear Mr. Browne:

I see by the latest issue of AMAZING STORIES that a reader of yours suggests that you put out an annual.

I am going to make a suggestion which will probably rate a raised eyebrow, a word or two of comment if published, and then be promptly forgotten. My purpose in writing this letter is not just to yak it up in the hope of seeing my name in print; I really feel that if you do this you'll get a good response. And here's the idea: instead of merely putting out an annual now, start way back in 1926, when AS started, and issue "annuals from the past"; i.e., take the best stories from each year of your magazine's existence and put them in one book with a

redo of one of the covers. Doing this would be an immeasurable boon to collectors, and would be of sufficient interest to be worth the price to fen in general, both active and inactive.

I realize that the work involved in doing this would be tantamount to putting out another magazine, but in my opinion it would be worth it.

Richard Lupoff
186-19 Aberdeen Road
Jamaica, New York

Your suggestion could well be a good one, but a broad interest in such a book would have to be indicated.

—Ed.

MR. POPP, TAKE A BOW

Dear Mr. Browne:

Well, it's about time. After months and months of reading issues that ranged from lousy to mediocre, you finally put out an issue that not only had excellent stories but good artwork too. That June ish sure made me sit up and take notice. Hang onto Walter Popp. That cover was the best in a year. If you must have the babes, O.K., but keep those knobby-kneed joes off the cover or else give them a spacesuit or something. The interior illos were exceptionally good, Ed Emsler being top man in the absence of Finlay.

"Secret of the Black Planet" was really an excellent story. It's been a long time, too long, since you've had one that good. That instantaneous regeneration sounds like a very useful faculty to have, except that you would tend to get careless with yourself.

"The Opposite Is Hell" by Chester Geier was very good. This contraterrene stuff is getting a little old, but a new slant is always interesting.

"Fifty Thousand Nuggets" by Don Wilcox wasn't too bad. Is Don slipping or something? Ed Emsler did a fine job on the illo but did even better on "Secret of the Black Planet".

"They Fly So High" was kind of dull but readable. Dave Stone's illo was really good; too bad the story didn't rate such a good pic.

I still don't know whether to place "Master of the Universe" as a story or an article. Anyway, installment III was very interesting. Could you send me, C.O.D., a copy of "The Man, the World, and the Norm" by Lewis DeKoven (Temple Photo Press, 2090)? Sounds interesting.

Now don't let me down, Howard. Maybe AS is getting out of its well-worn rut. Just keep 'em coming as good as the June ish.

Does anyone have some issues of '46 and '47 ASF that they would like to sell to a poor guy who can't afford dealer prices?

How about some serials?

Gary Pickersgill
Box 270
Sheldon, Iowa

MR. LESSER LOVES YOU VERY MUCH

Dear Mr. Browne:

I met up with science fiction about seven months ago. Since then most of my spare time has been occupied by science fiction. There must be something in it that gets into your blood, because I am 100% sold on it.

In my opinion the best story in your June issue of AMAZING STORIES was "The Secret of the Black Planet", by the one and only Milt Lesser. I think Lesser's stories are the best that I have seen yet. I hope to see more of Lesser in future issues. I am sorry to hear that he will be pushing a gun, instead of a typewriter. I know that a lot of his fans will miss him.

I also liked "Fifty Thousand Nuggets", "The Opposite Is Hell", and "They Fly So High". I did not like "Master of the Universe". I do not like serials because I lose the main part of the story during the gap between installments. Also, I don't like as many science facts as have been appearing in AMAZING STORIES. Put one of Lesser's stories in their place and your magazine will be tops in my book. (It already is.)

If there is a science-fiction fan club in St. Louis, will you please have them get in touch with me, because SF and ME seem to agree. Keep up the good work.

Larry Touzinsky
2911 Minnesota Avenue
St. Louis 18, Missouri

But, Larry, science facts are very popular with many of our readers, and Master of the Universe is bringing in loads of letters. —Ed.

MR. BLOODSTONE THANKS YOU

Dear Mr. Browne:

In some ways I think that Bloodstone has E. R. Burroughs beat all around! And I love a good Burroughs novel! (Have been collecting him for more than three years.) His LAND BEYOND THE LENS was terrific! It's one of the best stories you have had for years! You should keep to serials!

And I do think Bloodstone should do more stories about the "Lens"! Have him make it a series! And have another series started by him, something like the "Lens".

Though right at present I'm going to read some of the stories in Ray Bradbury's MARTIAN CHRONICLES, I'll soon turn to THE GOLDEN GODS. But,

to be truthful, I can't stand too much of that kind of story at once, and I also want to save it, keep it for later, as there aren't very many stories like it any more written!

Yours for more Bloodstone,

Charles Nuetzel
16452 Moorpark
Encino, California

A FINLAY FAN

Dear Sir:

Who is Virgil Finlay?

Why doesn't he do more illustrations? How about a short biographical sketch of his life in your next ish?

I have been on the verge of writing you many times before, but just didn't get around to it until my curiosity about Mr. Finlay caused the intention to become an act.

I have been reading AMAZING for many years, and it is still my top sf mag.

I want to thank you for many years of very enjoyable reading and I intend to continue reading it as long as it is published.

I do hope you can understand this coal-miner scrawl, and again thanks for a fine sf mag, and please don't forget the sketch.

A faithful reader and regular customer,

Charles S. Green, Jr.
Box 36,
Hernshaw, West Virginia

If you check through back issues, you'll find we use quite a few Finlay illustrations. —Ed.

ATTENTION, TRADERS.

Dear Sir:

Since this is my first fan letter, I'll say that I like AS very much.

The few AS Mags that I have read have been excellent. I had the "We the Machine" issue, also "Land Beyond the Lens". After that I more or less lost track of AS until the June '52 ish with the "Secret of the Dark Planet".

My reason for writing is this. I am an avid reader of science fiction. That is, when I can afford it. I liked "Land Beyond the Lens" very much, and now I see that there is a sequel, "The Golden Gods". I would like very much to have that particular story, and also any others that can be spared by your readers.

I have exactly five mags to trade, two AS, March '52 and June '52, one SF, May '52, one PLANET, May '52, and one FA, May '52.

I would dearly love to have as much science fiction as I can possibly get but my trading ability has been sadly cur-

tailed. So, please, readers, won't you help me?

Thank you very much.

Mrs. Joyce Mueller
1221 Burrell Avenue
Lewiston, Idaho

BOSTON PAPERS PLEASE COPY

Dear Editor:

I have just finished reading the June issue of your mag and would like to enter my opinions of the stories.

SECRET OF THE BLACK PLANET, to my mind, is not as good as the stories in your last ish. I thought that **THEY FLY SO HIGH** was one of the best stories in the mag, with **FIFTY THOUSAND NUGGETS** BY Don Wilcox running a close second. **THE OPPOSITE IS HELL** had its points, but that's all. What I like just about best in the mag are the little science articles that appear here and there in the issue. They give out with some really interesting tidbits now and then.

I am a newcomer to the science-fiction field and I would like to ask some questions. Particularly:

Are there any sf clubs that you know of near Boston?

Where can a newcomer get back issues of sf magazines?

If you could answer these two questions, I would appreciate it very much.

Kenneth S. Welsh
249 North Avenue
Wakefield, Massachusetts

Back number magazine dealers advertise in both AMAZING AND FANTASTIC ADVENTURES. —Ed.

MARSHALL PLAN.

Dear Ed:

I expect you have had letters from British fen before on this subject, but I wonder if you could help me. I have been suddenly taken ill, and have to stay in bed and cannot get any sf because of that; as this is my only form of reading, could you get some fan to send me some, do you think?

I don't know how long my illness will last, but I would be very grateful if you would help me.

Norman G. Wansborough
84 Nyke Road
Trowbridge, Wilts, England

WORDY BLAST

My dear Mr. Browne:

For as many years as I could appreciate good stf, I have been an **AMAZING** addict. Many times I have written letters, intending to send them to your mag-

azine, but they never seemed to get mailed. Mainly because I can see no reason for anybody to tell a lot of people (who have already read the stories) how good or bad he thinks a story was. So he didn't like Rog Phillips' latest or de Camp's newest, so what? It's still stf, and one of the best mediums for pleasant diversion printed. Science fiction should be an avenue for armchair adventure and intrigue. It should be read or, if you're like me, devoured, and taken for what it is: high adventure in space, time, space ships, distant and incongruous futures—and all fictitious.

These guys that look for a highly artistic cover first on the newsstands and the words **AMAZING STORIES** last, should go to an art gallery for their art and to your mag for stf. May I be so bold as to say, if you're putting out an art digest, you would so name it? Their illos are secondary to the stories; I don't buy AS to criticize Finlay or Lawrence or Valigursky. I use the illos for what they are meant for (to me)—a device to form in my mind pictures of a person, place or thing to which I can connect the data given in the story without the trouble of conjuring up a complete cast of characters and features for each character. The illos may not look like the people described in the story, but at least the hero doesn't look like my boss and the heroine doesn't mysteriously take on the features of my landlady.

Naturally I don't say that it's wrong to praise or criticize a story or picture and I don't say that I just drool over every bit of printed matter in your book, but why delude myself? Nobody likes the same things, so, if I were to praise one story and say another was rotten—somebody would be sure to think I was losing my marbles. There's enough dissension on this wee little planet anyway. Why add to it?

I buy AS because it publishes stf. Any comments? I hope so. I'm only eighteen years old, but it only took a few of those years to build up this wordy blast at those people who attempt to tell us other readers which story was good and which bad.

This is a heck of a long letter, but it's been brewing for a long time.

I liked all your yarns in the May '52 mag and all of them in all the issues before it but I know many "critics" probably think it was rotten. Oh, well, there's some in every crowd.

Danny Scafer
1524 East 10th Street
Long Beach, California

Maybe there will be some fan comment on your aversion, Danny. Personally, we can't back you up. Look at it this way: Stf mags are bought for pleasure. If fans enjoy writing in to classify the stories, isn't that part of the pleasure? —Ed.

SOMETHING FOR DRACULA

Don't Fence Me In

By Charles Recour

PVPI! THOSE three initials stand for a chemical which may affect your life—and will certainly affect the lives of many millions of people. They stand for "polyvinyl pyrrolidone", an elaborate chemical name for synthetic blood plasma. In an age when machines are equated with human beings, there is something ghoulish about thinking of synthetic blood—it conjures up images of vampires and Draculas, of bats and robots. Actually it is a God-send, destined to enable many people to live, people who are as yet unborn.

This chemical is closely akin to the many synthetics used in plastics of the shower-curtain variety. It was discovered in Germany during the Second World War and appears to be one of the few medical discoveries untainted by the Nazi monsters. Because of heavy casualties and insufficient natural blood plasma, chemists miraculously synthesized this material, and it was given to hundreds of thousands of soldiers and civilians. When news of it got abroad, it was regarded as suspect, but recently it was re-evaluated here and now we are importing it by the ton and preparing to manufacture it. It is a perfectly good substitute, superior in some ways to natural blood plasma. A nightmare has vanished from the American medical scene because of this drug.

Physicians have long contemplated an atomic war with horror, because the radiation casualties require, as a shock treatment, blood plasma in vast quantities. They knew that, because of the number of casualties expected, there wouldn't be enough blood to go around no matter how many donors there were. PVP eliminates this worry. Should the dreaded events occur, PVP will be in plentiful supply and tens, if not hundreds, of thousands of people will live because of it.

The implications of this discovery for the future of medicine are tremendous, too. Blood has long been regarded as the very essence of life. Yet here, in the chemical laboratory, this vital fluid has to all intents and purposes been duplicated. If synthetic blood can be created, what about bone—and tissue? This is not to imply that synthetic men are likely to be "built", but the "repair" materials are at hand. The future looks bright.

June Lurie

SINCE THE world came out of the doldrums of the Twenties and through the ghastly war of the Forties, governments have been generous with money, materials and time for applied science. This is especially true of America. Realization that scientific research is such a powerful tool for alleviating men's troubles and problems is shared by everyone. Therefore, science is given everything it requires to produce the answers. Unfortunately, this smashing, steam-roller approach to scientific problems doesn't produce results proportionate to the effort expended. This is a fact.

Professor Kerr, a psychologist at the Illinois Institute of Technology observed this fact (along with others) and decided to account for it. Asiduous research with questionnaires and interviews disclosed some very interesting material on the nature of scientific research and scientific researchers. It also showed that the magnitude of a project was not a guarantee of results—brains still count for more!

The one outstanding fact discerned about researchers was this: Absolute freedom with little supervision and no pressure at all enabled the first-rate researcher to far out-produce his disciplined cohort. The most productive researchers were generally of the "lone wolf" type, spending their time as they saw fit, subject to a minimum of overseeing. On the other hand, Professor Kerr's observation is that the "plugger-type" of researcher delivers generally at a low level. He works according to plan, is extremely anxious for recognition, is wonderfully cooperative, is an eight-to-five worker and apparently possesses all the virtues—except that his work is definitely second rate!

Kerr, admitting that the analysis was not complete, nevertheless believes that it points out certain fundamental ideas about research, especially that it is akin to an art rather than a science, and requires the freedom of environment of art, rather than the discipline of the factory or the military. Without going into flights of metaphysical fancy and poesy, first rate scientific minds flourishing in an atmosphere of personal freedom are the major ingredient for the first rate results. The "grubbers" may steam-roller a solution to a simple problem, but the brains are still superior!

COOPERATION IN COLOR

IT IS NO secret that the world of science and technology is international, transcending nationalistic bounds far more rapidly than diplomatic and social and military groups. And in this fact probably lies the salvation of the world—if that's conceivable. Transportation has shrunk time and space so rapidly that the technical people have been forced to cooperate.

The latest step in this never-ending process of cooperation concerns the standardization of colored signal lights used on ships and planes and flying fields. It's a little thing—colored lights—but apparently it's extremely important. To a ship's captain entering a strange harbor, the color of the marking lights tells everything, and to an aircraft pilot the string of colored lights, in addition to what he learns from his radio, means the difference between landing and cracking up. To make sure that this doesn't happen an international committee has standardized the meaning and color of signaling devices ranging from lights through flags and symbols to radio codes and beacon markers.

Even with the world divided into two armed camps, the opponents take cognizance of this difficulty, and even the stubborn Russians cooperate in these matters. It's a case of cooperate or die!

Ralph Cox

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NIKE - ROCKET GODDESS

QUIETLY, without fanfare, and yet with a significance that transcends the usual publicity-shouting, the military authorities released the following information: A few months ago, over a quiet western town, a B-29 bomber flying at thirty thousand feet was met—and destroyed—by a slim needle of an interception rocket called, after the Greek goddess of Victory, the “Nike”.

The destruction was not actual, only simulated. As the bomber thundered overhead radar intercepted it, plotted its path, and shot out the imperious guided missile, the Nike. The Nike rose on a pillar of flame, ascended into the sky in seconds, and a minute later made proximity-fused contact with the bomber. Witness: scratch one bomber!

So uneventfully was the actual operation of the guided missile heralded! Hitherto the authorities have kept quiet about the success of actual guided missiles, speaking only in generalities about how well they were coming along. Now they are out of the realm of theory and into operation. As an added note, the

Military announced that the Nike is in mass production!

You don't have to be a strategist to deduce what this means. A chain of radar stations already exists around the nation. This, coupled with a similar chain of interceptor-rocket launching stations, means that enemy bombers sweeping in to the attack can be picked off at ease with the incredibly accurate and effective missiles. The Nike is a descendant of the V-2. The principles are standard rocketry. The telemetering and controlling of the interceptor rockets must be something to write home about, but of course no information on these matters has been vouchsafed.

The age of rocketry is not coming. It is here; this perfecting of the guided missile as a working apparatus clearly points the way to the future. Whether or not the Military actually intend to develop space-going rockets is relatively unimportant because, regardless of their intentions, it follows automatically, as the night the day, any rocket or missile developments pursue that eventual line. Guided missiles like the Nike are the first step into space....

Peter Dakin

DIAGNOSES BY RADIO

SOMETIMES the difference between what a doctor orders a patient to do and what that patient does—is tremendous. And doctors know full well that it's very hard to get a patient to obey orders—especially since they can't keep an eye on the subject all the time—or can they?

A new experimental device has made its appearance, which promises to promote the advancement of certain phases of observational medicine. It is designed specifically for cardiac patients and for some patients with slight mental disturbances. It consists of a microphonic pick-up attached to the patient's chest (if he's a heart case) or special electrodes attached to the head (if he's a mental case). Those gadgets are in turn connected to a fly-weight transmitter which the patient wears. No matter what activity he's engaged in, this monitoring device broadcasts a continuous chain of impulses to the doctors'

laboratories where they are fed to an oscilloscope and a direct visual image recorded. Thus the doctor can study at all times and under all circumstances—including sleep—the behavior of the victim's heart and brain waves!

The potential value of such apparatus is tremendous. In effect, it enables a completely detailed analysis of the patient's reactions at all times and under all conditions. It provides for a complete check on the patient's activities and a measure of how he adheres to instructions. This method of study by remote control is really nothing new basically for it has been applied to the study of machinery, to meteorology, the study of aircraft, rockets etc., under the name “telemetering”, but this is the first time it has been applied to human beings. It is essentially a continuous spy system but for a good purpose. Thus does Man again benefit from scientific research.

Tom Lynch

POWERFUL PEANUT



THE FONDEST DREAM of scientists—outside the atomic world—is to store electricity, a simple fact which may come as a revelation. Today, outside of the electrical condenser and the inductance coil, there is no way to store electricity—and both of these contrivances store it in gnat-force quantities, good enough for electronics but no good for power.

The chemical battery which is popularly regarded as a "juice-storer" is in reality a chemical reservoir, not an electrical one, and at that it is too inefficient to count—at least that what's been thought for a long time. Witness the rapid disappearance of the battery automobile. But the battery boys have been hard at work and an ingenious new battery has been designed employing a silver-zinc couple which weighs but one-fifth as much as ordinary batteries for an equal quantity of kilowatt-hours. That's a big reduction, and it means battery power stands a chance of coming into its own, a marvelous sort of existence where the simple electric motor does the dirty work instead of the Diesel or gas engine.

In fact a Canadian engineer has proposed that railroads consider partial electrification, emphasizing engines powered by these zinc-silver batteries, able as well to operate off a third rail or overhead trolley system. The cost would be a lot less than that of the already economical Diesel engine which has so captivated the railroad moguls.

The use of the zinc-silver battery also makes conceivable a return to the clean, simple, elementary, electric automobile, till now regarded as an anachronism. With zinc-silver batteries you could store quite a lot of miles between each recharging of the batteries. Considering what's happening to the oil supply, this may make a good deal of sense.

Naturally, as we have so often stressed, the world still awaits the invention of a simple electricity-storage gadget, not one of which even appears remotely on the horizon. Storing electricity, not chemical energy, will be one of the greatest advances in modern civilization—if it ever comes about!

William Karney

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HELL WAS NEVER LIKE THIS

SCIENCE has dug deep into its magic box of tricks to come up with a piece of the Devil's own property, a burning flame hotter than ten shades of Hades! The last couple of years have seen the appearance of several torches and flame producers capable of melting anything. In fact, a short time ago someone invented a torch which burned a stream of aluminum metal in powder form in a stream of oxygen gas. This combination was capable of melting any known substances. In fact it could cut through fire-brick like a knife through butter.

But the new torch goes it one better. It burns a stream of virulent fluorine in an atmosphere of hydrogen gas. Fluorine alone is about the most active corrosive chemical element imaginable. Reacting with hydrogen gives an effect almost incommensurable and the flame produced will simply devour anything. Its temperature is higher than the oxyaluminum torch—that is, it reaches eight thousand degrees Fahrenheit!—and any refractory substances against which it is brought go up in puffs of smoke.

This instance is one where science has outdone itself. Actually there is no practical use for such a torch! Conventional tools can do any required melting or welding jobs more easily. The H-F torch is simply a laboratory curiosity. But that doesn't mean it may be a wasted effort. Lab curiosities have a habit of becoming extremely useful out of a clear sky.

Short of the temperatures within the Sun and within nuclear bomb reactions, the H-F torch provides men with their hottest conditions. Since the former two furnaces are uncontrollable, the H-F torch will provide a source of atom-molecular wrecking conditions which till now have never been achieved in even electric arc furnaces. The manufacture of synthetic diamonds may be initiated by this advance and the search for new refractories will undoubtedly be stimulated.

For a long time the old philosophers sought for a "universal solvent", a substance which could dissolve absolutely anything (perhaps including its container). So far the nearest approach to this hypothetical fluid is the ravaging flame of H-F....

Jack Winter

SPOTLIGHT ON SPACE

FOR ALL the hullabaloo that accompanied the long-term creation of the gigantic two-hundred-inch reflecting telescope on Mount Palomar, there has been a significant dearth of photographs. Why this is so is not clear, but recently a few have been released and they show the impressive results of the monstrous instrument. If only that giant eye were turned on the planets or the Moon!

In particular a photograph of a famous spiral galaxy, the Messier 104, has been offered. Now this galaxy, which is some ninety million light years away, has often been photographed and its image is common in many astronomy textbooks and popular publications. But, seen through the two-hundred-inch scope, the galaxy takes on a sharpness and clarity of form so magnificent that it is hard to realize that an island universe is encompassed in the span of an inch, that this little photographic blob is actually composed of millions and millions of stars like our own. It is receding from us at about eleven hundred kilometers per second and its outer edges rotate at about three hundred kilometers per second. These figures, of course convey none of the drama of the photograph, and they only serve to show what calculations can be made about something as remote as human minds can conceive.

Gazing at the edged blob of light which makes up the galaxy conveys such an impression of the depths of space, that an observer has the feeling of literally falling into its vastness. The hundred-inch scope might convey this impression with certain celestial objects, but not as movingly as the two-hundred-inch.

Amateur astronomers, s-f fans and rocketeers are anxiously awaiting the release of planetary and Lunar photographs taken with the instrument. These, despite the claim of astronomers that visual atmospheric "seeing" will contribute little to what is already known, will still be magnificent, for they will bring the surfaces of our nearer worlds closer than ever before, and until men get into rockets and out into the depths of the void, just looking will have to do!

Jack Winter

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Ralph Cox

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Robert McCre Williams

(continued from second cover)

sold, frankly, I don't know. I have been keeping my own and a couple of pen names busy for several years.

Why do I write science-fiction? Of course, I don't write science-fiction exclusively. I have turned out many a western and detective story, also articles. But I always come back to science fiction. Not only were my first sales made in this field, but long, long before I started writing it, I had read science-fiction and fantasy pieces with awe and delight. When I started writing, what was more natural than to attempt to produce material along similar lines?

If I have succeeded in giving to half a million or so readers, many of them youngsters, the basic belief that tomorrow will be a pretty decent day, I will feel that I have kept faith not only with the generations behind me but also with the ones to follow. I will also feel that I have done a very small part toward making real that world of the future which is at present only a fiction, a dream, in the minds of some of us.